APPENDIX A TO CHAPTER IV

GSES COMPARED WITH THE PRIMARY CONVENTIONAL CONFORMING MORTGAGE MARKET

Appendix A to the final rule provided a comprehensive analysis of the affordable lending performance of the GSEs, covering the period since the housing goals were placed into effect in 1993. That analysis examined extent to which the GSEs' loan purchases mirror or depart from the patterns found in the conventional conforming mortgage market. The GSEs' affordable lending performance is also compared with the performance of depository lenders such as commercial banks and thrift institutions. Dimensions of lending considered include the three "goals-qualifying" categories—special affordable borrowers, less-than-median income borrowers, and underserved areas. The special affordable category consists mainly of very-low-income borrowers, or borrowers who have an annual income less than 60 percent of area median income. Because this category is more targeted than the broadly-defined less-than-median-income (or low-mod) category, the discussion below will often focus on the special affordable category as well as the underserved areas category which adds a neighborhood dimension (low-income and high-minority census tracts) to the analysis. The analysis also compared the performance of Fannie Mae and Freddie Mac in funding first-time homebuyers with that of primary lenders in the conventional conforming market.

This Appendix reproduces Sections E.6-E.11 of that analysis. The analysis documents the improvement of the GSEs under the housing goals and indicates where further improvement is needed. The main findings from this Appendix are summarized in Section D of this chapter.

Sections A and B of this appendix define the primary mortgage market and discuss some technical issues related to the use of the GSE and HMDA data. Sections C and D compare the GSEs' performance with market performance for home purchase and first-time homebuyer loans, while Section E does the same for total single family loans (that is, refinance loans and home purchase loans).

A. Definition of Primary Market

Conventional Conforming Market. The market analysis in this section and Section IV is based mainly on HMDA data for mortgages originated in the conventional conforming market of metropolitan areas during the years 1992 to 2002. Only conventional loans with a principal balance less than or equal to the conforming loan limit are included; the conforming loan limit was $300,700 in 2002—these are called "conventional conforming loans". The GSEs' purchases of FHA-insured, VA-guaranteed, and Rural Housing Service loans are excluded from this analysis. The conventional conforming market is used as the benchmark against which to evaluate the GSEs because that is the market definition Congress requires that HUD consider when setting the affordable housing goals. However, as discussed in Section C of this chapter, some have questioned whether lenders in the conventional market are doing an adequate job meeting the credit needs of minority borrowers, which suggests that this market provides a low benchmark.[169]

[169] The market definition in this section is narrower than the "Total Market" data presented earlier in Tables 4.1 and

Manufactured Housing Loans. In their comments on the proposed 2000 Rule, both GSEs raised questions about whether loans on manufactured housing should be excluded when comparing the primary market with the GSEs. The GSEs purchase these loans, but they have not played a significant role in the manufactured housing loan market. As emphasized by HUD in its 2000 GSE Rule, manufactured housing is an important source of home financing for low-income families and for that reason, should be included in any analysis of affordable lending. However, for comparison purposes, data are also presented for the primary market defined without manufactured housing loans. Because this analysis focuses on metropolitan areas, it does not include the substantial number of manufactured housing loans originated in non-metropolitan areas.

Subprime Loans. Both GSEs also raised questions about whether subprime loans should be excluded when comparing the primary market with their performance. In its final 2000 GSE Rule, HUD argued that borrowers in the A-minus portion of the subprime market could benefit from the standardization and lower interest rates that typically accompany an active secondary market effort by the GSEs. A-minus loans are not nearly as risky as B&C loans and the GSEs have already started purchasing A-minus loans (and likely the lower "B" grade subprime loans as well). The GSEs themselves have mentioned that a large portion of borrowers in the subprime market could qualify as "A credit". This analysis includes the A-minus portion of the subprime market, or conversely, excludes the B&C portion of that market.

Unfortunately, HMDA does not identify subprime loans, much less separate them into their A-minus and B&C components.[170] Randall M. Scheessele at HUD has identified approximately 200 HMDA reporters that primarily originate subprime loans and account for about 60-70 percent of the subprime market.[171] To adjust HMDA data for B&C loans, this analysis follows HUD's 2000 Rule which assumed that the B&C portion of the subprime market accounted for one-half of the loans originated by the subprime lenders included in Scheessele's list.[172] As shown below, the effects of adjusting the various market percentages for B&C loans are minor mostly because the analysis in this section focuses on home purchase loans, which historically have accounted for less than one quarter of the mortgages originated by subprime

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4.2, which included all home loans below the conforming loan limit, that is, government loans as well as conventional conforming loans. The market share analysis reported in Section E and Appendix B also examines the GSEs' role in the overall market.

170 And there is some evidence that many subprime loans are not even reported to HMDA, although there is nothing conclusive on this issue. See *Fair Lending/CRA Compass*, June 1999, p. 3.

171 The list of subprime lenders as well as Scheessele's list of manufactured housing lenders are available at http://www.huduser.org/publications/hsgfin.html.

172 The one-half estimate is conservative as some observers estimate that B&C loans account for only 30-40 percent of the subprime market. However, varying the B&C share from 50 percent to 30 percent does not significantly change the following analysis of home purchase loans because subprime loans are mainly for refinance purposes. Overstating the share of B&C loans in this manner also allows for any differences in HMDA reporting of different types of loans—for example, if B&C loans account for 35 percent of all subprime loans, then assuming that they account for 50 percent is equivalent to assuming that B&C loans are reported in HMDA at 70 percent of the rate of other loans.

lenders—the subprime market is mainly a refinance market.[173]

Lender-Purchased Loans in HMDA. When analyzing HMDA data, Fannie Mae includes in its market totals those HMDA loans identified as having been purchased by the reporting lender, above and beyond loans that were originated by the reporting lender.[174] Fannie Mae contends that there are a subset of loans originated by brokers and subsequently purchased by wholesale lenders that are neither reported by the brokers nor the wholesale lenders as originations but are reported by the wholesale lenders as purchased loans. According to Fannie Mae, these HMDA-reported purchased loans should be added to HMDA-reported originated loans to arrive at an estimate of total mortgage originations.

The market definition in this analysis includes only HMDA-reported originations; purchased loans are excluded from the market definition. While some purchased loans may not be reported as originations in HMDA (the Fannie Mae argument), there are several reasons for assuming that most HMDA-reported purchased loans are also reported in HMDA as market originations. First, Fed staff have told HUD that including purchased loans would result in double counting mortgage originations.[175] Second, comparisons of HMDA-reported FHA data with data reported by FHA supports the Fed's conclusion. For instance, FHA's own data indicate that during 2001 FHA insured 752,319 home purchase loans in metropolitan areas; the sum of HMDA-reported purchased home loans and HMDA-reported originated home loans in metropolitan areas alone yields a much higher figure of 845,176 FHA-insured loans during 2001.[176] While these calculations are for the FHA market (rather than the conventional market), they suggest that including HMDA-reported purchased loans in the market definition would overstate mortgage origination totals. Third, Abt Associates surveyed nine wholesale lenders and questioned them concerning their guidelines for reporting in HMDA loans purchased from brokers. Most of these lenders said brokered loans were reported as originations if they [the wholesale lender] make the credit decision; this policy is consistent with the Fed's guidelines for HMDA reporting. Abt Associates concluded that "brokered loans do seem more likely to be reported as originations…"[177]

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[173] The reductions in the market shares are more significant for total loans, which include refinance as well as home purchase loans; for data on total loans, see Table 4.14 in Section E of this appendix. Subprime lenders have been focusing more on home purchase loans recently. The home purchase share of loans originated by the subprime lenders in Scheessele's list increased from 26 percent in 1999 to 36 percent in 2000 before dropping to about 30 percent during the heavy refinancing years of 2001 and 2002.

[174] In 2001 (2002), lenders reported in HMDA that they *purchased* 851,735 (906,684) conventional conforming, home purchase loans in metropolitan areas; this compares with 2,763,230 (2,929,197) loans that these same lenders reported that they *originated* in metropolitan areas.

[175] See Randall M. Scheessele, *HMDA Coverage of the Mortgage Market*, Housing Finance Working Paper No. HF-007. Office of Policy Development and Research, U.S. Department of Housing and Urban Development, July, 1998.

[176] In this example, HMDA-reported purchased loans insured by FHA have been reduced from 411,930 to 100,251 by a procedure that accounts for missing data and overlapping purchased and originated loans. See Bunce (2002) for an alternative analysis showing that a market estimate based on adding HMDA-reported purchased loans to HMDA-reported originations would substantially overstate the volume of FHA mortgage originations in metropolitan areas.

[177] See Chapter III, "Reporting of Brokered and Correspondent Loans under HMDA", in *Exploratory Study of the*

Finally, it should be noted that including purchased loans in the market definition does not significantly change the goals-qualifying shares of the market, mostly because borrower income data are missing for the majority of purchased loans. In addition, the low-income and underserved area shares for purchased and originated loans are rather similar. In 2001, the following shares for the conventional conforming home purchase market were obtained for purchased and originated loans: low-income (25.8 percent for purchased loans, 28.3 percent for market originations), low-mod income (41.3 percent, 43.2 percent), and underserved areas (24.2 percent, 25.8 percent). In 2002, the comparisons were as follows: low-income (26.6 percent for purchased loans, 29.7 percent for market originations), low-mod income (42.3 percent, 45.3 percent), and underserved areas (28.8 percent, 27.2 percent).[178]

B. Technical Issues: Using HMDA Data to Measure the Characteristics of GSE Purchases and Mortgage Market Originations[179]

This section discusses important technical issues concerning the use of HMDA data for measuring the GSEs' performance relative to the characteristics of mortgages originated in the primary market. The first issue concerns the reliability of HMDA data for measuring the borrower income and census tract characteristics of loans sold to the GSEs. Fannie Mae, in particular, contends that HMDA data understates the percentages of its business that qualify for the three housing goals. In its comments on the proposed 2000 Rule, Fannie Mae questioned HUD's reliance on HMDA data for measuring its performance. As discussed below, HMDA data on loans sold to the GSEs do not include prior-year (seasoned) loans that are sold to the GSEs. Since about one-fourth of GSE purchases in any particular year involve loans originated in prior years, HMDA data will not provide an accurate measure of the goals-qualifying characteristics of the GSEs' total purchases when the characteristics of prior-year loans differ from those of newly-originated, current-year loans.

A related issue concerns the appropriate definition of the GSE data when making annual comparisons of GSE performance with the market. On the one hand, the GSE annual data can be expressed on a purchase-year basis, which means that all GSE purchases in a particular year would be assigned to that particular year. Alternatively, the GSE annual data can be expressed on an origination-year basis, which means that GSE purchases in a particular year would be assigned to the calendar year that the GSE-purchased mortgage was originated; for example, a GSE's purchase during 2001 of a loan originated in 1999 would be assigned to 1999, the year the loan was originated. These two approaches are discussed further below.

Accuracy of HMDA Data, by Abt Associates Inc. under contract for the Office of Policy Development and Research, HUD, February 12, 1999, page 18.

178 The percentage shares for purchased loans are obtained after eliminating purchased loans without data and purchased loans that overlap with originated loans. The calculations included 138,536 purchased loans for 2001 and 182,290 purchased loans for 2002.

179 Readers not interested in these technical issues may want to proceed to Section III.C, which compares GSE performance to the primary market.

A final technical issue concerns the reliability of HMDA for measuring the percentage of goals-qualifying loans in the primary market. Both GSEs refer to findings from a study by Jim Berkovec and Peter Zorn concerning potential bias in HMDA data.[180] Based on a comparison of the borrower and census tract characteristics between Freddie Mac-purchased loans (from Freddie Mac's own data) and loans identified in 1993 HMDA data as sold to Freddie Mac, Berkovec and Zorn conclude that HMDA data overstate the percentage of conventional conforming loans originated for lower-income borrowers and for properties located in underserved census tracts. If HMDA data overstate the percentage of goals-qualifying loans, then HUD's market benchmarks (which are based on HMDA data) will also be overstated. The analysis below does not support the Berkovec and Zorn findings—it appears that HMDA data do not overstate the share of goals-qualifying loans in the market. The discussion below of the GSEs' purchases of prior-year and current-year loans also highlights the strategy of purchasing seasoned loans that qualify for the housing goals. The implications of this strategy for understanding recent shifts in the relative performance of Fannie Mae and Freddie Mac are discussed below in Section III.C.3.

GSEs' Purchases of "Prior-Year" and "Current-Year" Mortgages. There are two sources of loan-level information about the characteristics of mortgages purchased by the GSEs—the GSEs themselves and HMDA data. The GSEs provide detailed data on their mortgage purchases to HUD on an annual basis. As part of their annual HMDA reporting responsibilities, lenders are required to indicate whether their new mortgage originations or the loans that they purchase (from affiliates and other institutions) are sold to Fannie Mae, Freddie Mac or some other entity. There have been numerous studies by HUD staff and other researchers that use HMDA data to compare the borrower and neighborhood characteristics of loans sold to the GSEs with the characteristics of all loans originated in the market. One question is whether HMDA data, which is widely available to the public, provides an accurate measure of GSE performance, as compared with the GSEs' own data.[181] Fannie Mae has argued that HMDA data understate its past performance, where performance is defined as the percentage of Fannie Mae's mortgage purchases accounted for by one of the goal-qualifying categories. As explained below, over the past six years, HMDA has provided rather reliable national-level information on the goals-qualifying percentages for the GSEs' purchases of "current-year" (i.e., newly-originated) loans, but not for their purchases of "prior-year" loans.[182]

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[180] See Jim Berkovec and Peter Zorn, "How Complete is HMDA? HMDA Coverage of Freddie Mac Purchases," *The Journal of Real Estate Research*, Vol. II, No. 1, Nov. 1, 1996.

[181] For another discussion of this issue, see Randall M. Scheessele, *HMDA Coverage of the Mortgage Market*, Housing Finance Working Paper HF-007, Office of Policy Development and Research, Department of Housing and Urban Development, July 1998. Scheessele reports that HMDA data covered 81.6 percent of the loans acquired by Fannie Mae and Freddie Mac in 1996. The main reason for the under-reporting of GSE acquisitions is a few large lenders failed to report the sale of a significant portion of their loan originations to the GSEs. Also see the analysis of HMDA coverage by Jim Berkovec and Peter Zorn. "Measuring the Market: Easier Said than Done," *Secondary Mortgage Markets.* McLean VA: Freddie Mac, Winter 1996, pp. 18-21; as well as the Berkovec and Zorn study cited in the above footnote.

[182] Between 1993 and 1996, the GSEs' purchases of prior-year loans were not as targeted as they were after 1996; thus, during this period, HMDA provided reasonable estimates of the goals-qualifying percentages of the GSEs' purchases of all (both current-year and prior-year) loans, with a few exceptions (see Table 4.6).

Table 4.6

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase Mortgages, 1992-2002

	Fannie Mae Data			HMDA Data	Freddie Mac Data			HMDA Data	Conforming Market
	Prior Year	Current Year	All	for Fannie Mae	Prior Year	Current Year	All	for Freddie Mac	(W/O B&C Loans[1])
Special Affordable									
1992				6.3				6.5	10.4
1993	8.3	8.2	8.2	8.8	5.1	7.5	7.3	7.8	12.6
1994	9.7	10.9	10.7	11.4	7.7	8.2	8.2	9.2	14.1
1995	13.4	11.0	11.4	10.5	9.3	8.3	8.4	8.9	14.4
1996	10.8	10.3	10.4	10.5	8.5	8.9	8.8	9.4	15.0
1997	16.1	10.3	11.7	10.5	9.3	9.1	9.2	9.4	15.2
1998	18.1	12.0	13.2	10.7	12.1	11.4	11.5	9.7	15.4
1999	12.1	12.6	12.5	12.5	13.2	12.7	12.8	12.6	17.0
2000	13.5	13.2	13.3	13.7	17.9	13.4	14.7	13.3	16.8
2001	18.1	14.2	14.9	13.4	17.9	13.3	14.4	12.3	15.6
2002	18.8	15.8	16.3	15.5	15.8	15.8	15.8	14.5	16.3
Less Than Area Median Income									
1992				29.2				28.7	34.4
1993	30.8	33.8	33.5	35.0	25.2	32.5	31.9	32.3	38.9
1994	36.1	39.4	38.8	40.1	32.0	34.1	33.7	35.6	41.8
1995	39.0	38.2	38.3	37.1	34.2	32.5	32.8	33.9	41.4
1996	36.0	37.3	37.0	37.7	32.3	34.1	33.7	35.3	42.2
1997	42.3	37.0	38.3	37.5	34.2	34.8	34.7	35.4	42.5
1998	45.9	39.6	40.9	38.1	36.9	37.7	37.6	36.2	42.8
1999	38.0	40.6	40.0	40.2	39.4	41.2	40.8	41.0	44.8
2000	39.8	41.1	40.8	42.0	47.3	40.9	42.7	41.3	44.4
2001	45.3	42.3	42.9	41.5	43.8	40.5	41.3	39.2	42.9
2002	45.3	45.4	45.3	45.6	42.4	44.4	44.0	43.5	45.2
Underserved Areas									
1992				18.3				18.6	22.2
1993	23.8	19.3	20.3	18.2	19.4	18.0	18.2	17.6	21.9
1994	26.5	23.5	24.2	22.5	21.0	19.2	19.6	19.2	24.3
1995	27.4	23.8	24.6	22.8	22.3	19.2	19.9	19.1	25.4
1996	23.4	21.8	22.3	21.6	22.2	18.9	19.6	19.0	24.9
1997	29.1	20.6	23.0	21.0	22.1	19.1	19.7	18.6	24.9
1998	28.3	20.8	22.7	19.6	21.9	19.3	19.8	17.4	24.2
1999	21.9	20.0	20.4	20.3	23.1	20.3	20.9	19.3	25.2
2000	26.6	22.4	23.4	22.5	23.9	21.2	22.0	20.9	26.4
2001	28.3	23.3	24.4	22.0	25.7	21.3	22.3	19.5	25.2
2002	32.7	25.5	26.7	24.6	29.4	25.0	25.8	21.4	26.4

Notes: The Fannie Mae and Freddie Mac data for their purchases of "Prior Year" mortgages, "Current Year" mortgages, and "All" mortgages are from the loan-level data that they provide to HUD. All mortgages are conventional conforming home purchase mortgages. The "HMDA Data for (GSE)" are those mortgages that HMDA identifies as being sold to the GSEs. The Conforming Market data are from HMDA data. 'Mortgages with a loan amount greater than six times borrower income are excluded for the purposes of the low- and moderate-income and special affordable analyses. In both the GSE and market analyses, mortgages classified as special affordable include mortgages from very-low-income borrowers and low-income borrowers living in low-income census tracts. Because missing value percentages differ between GSE and HMDA data, mortgages with missing data are excluded from both the GSE and market data.

[1] The adjustment assumes that B&C loans represent one-half of the subprime market. The adjustment for home purchase loans is small because subprime (B&C) loans are mainly refinance loans. For further discussion, see text.

In any given calendar year, the GSEs can purchase mortgages originated in that calendar year or mortgages originated in a prior calendar year. In 2001 and 2002, for example, purchases of prior-year mortgages accounted for approximately 20 percent of the home loans purchased by each GSE.[183] HMDA data provide information mainly on newly-originated mortgages that are sold to the GSEs—that is, HMDA data on loans sold to the GSEs will not include many of their purchases of prior-year loans. The implications of this for measuring GSE performance can be seen in Table 4.6, which provides annual data on the borrower and census tract characteristics of GSE purchases, as measured by HMDA data and by the GSEs' own data. Table 4.6 divides each of the GSEs' goals-qualifying percentages for a particular acquisition year into two components, the percentage for "prior-year" loans and the percentage for "current-year" loans.

Consider Fannie Mae's special affordable purchases in 2002. According to Fannie Mae's own data, 16.3 percent of its purchases during 2002 were special affordable loans. According to HMDA data, only 15.5 percent of loans sold to Fannie Mae fell into the special affordable category. In this case, HMDA data underestimate the special affordable share of Fannie Mae's purchases during 2002. What explains these different patterns in the GSE and HMDA data? The reason that HMDA data underestimate the special affordable percentage of Fannie Mae's 2002 purchases can be seen by disaggregating Fannie Mae's purchases during 2002 into their prior-year and current-year components. Table 4.6 shows that the overall figure of 16.3 percent for special affordable purchases is a weighted average of 18.8 percent for Fannie Mae's purchases during 2002 of prior-year mortgages and 15.8 percent for its purchases of current-year purchases. The HMDA-reported figure of 15.5 percent is based mainly on newly-mortgaged (current-year) loans that lenders reported as being sold to Fannie Mae during 2002. The HMDA figure is similar in concept to the current-year percentage from the GSEs' own data. And the HMDA figure and the GSE current-year figure are practically the same in this case (15.5 versus 15.8 percent). Thus, the relatively large share of special affordable mortgages in Fannie Mae's purchases of prior-year mortgages explains why Fannie Mae's own data show an overall (both prior-year and current-year) percentage of special affordable loans that is higher than that reported for Fannie Mae in HMDA data.

Reliability of HMDA Data. With the above explanation of the basic differences between GSE-reported and HMDA-reported loan information, issues related to the reliability of HMDA data can now be discussed. Table 4.7 presents the same information as Table 4.6, except that the data are aggregated for the years 1993-5, 1996-2002, and 1999-2002. Comparing HMDA-reported data on GSE purchases with GSE-reported current-year data suggests that, on average, HMDA data have provided reasonable estimates of the goals-qualifying percentages for the GSEs' current-year purchases (with the exception of Freddie Mac's underserved area loans, as discussed below). For example, Fannie Mae reported that 13.0 percent of the current-year loans it purchased between 1996 and 2002 were for special affordable borrowers. In their HMDA submissions, lenders reported a nearly identical figure of 12.7 percent for the special affordable share of loans that they sold to Fannie Mae. The corresponding numbers for Freddie

[183] During the 1990s, the GSEs increased their purchases of seasoned loans; see Paul B. Manchester, *Goal Performance and Characteristics of Mortgages Purchased by Fannie Mae and Freddie Mac, 1998-2000,* Housing Finance Working Paper No. HF-015, Office of Policy Development and Research, HUD, May 2001.

Mac were 12.4 percent reported by them and 11.9 percent reported by HMDA. During the same period, both Fannie Mae and HMDA reported that approximately 22 percent of current-year loans purchased by Fannie Mae financed properties in underserved areas. However, Freddie Mac reported that 21.0 percent of the current-year loans it purchased between 1996 and 2002 financed properties in underserved areas, a figure somewhat higher than the 19.5 percent that HMDA reported as underserved area loans sold to Freddie Mac during that period.[184]

The facts that the GSE (both Fannie Mae and Freddie Mac) and HMDA figures for special affordable and low-mod loans are similar, and that the Fannie Mae and HMDA figures for underserved areas are similar, suggest that the Berkovec and Zorn conclusions about HMDA being upward biased are wrong.[185] For the 1996-to-2002 period, the discrepancies reported in Table 4.6 as well as Table 4.7 are mostly consistent with HMDA being biased in a downward direction, not an upward direction as Berkovec and Zorn contend.[186] In particular, the Freddie Mac-reported underserved area percentage being larger than the HMDA-reported underserved area percentage suggests a downward bias in HMDA. The more recent and complete (Fannie Mae data as well as Freddie Mac data) analysis does not support the Berkovec and Zorn finding that HMDA overstates the goals-qualifying percentages of the market.[187]

Purchase-Year Versus Origination-Year Reporting of GSE Data. In comparing the GSEs' performance to the primary market, HUD has typically expressed the GSEs' annual performance on a purchase-year basis. That is, all mortgages (including both current-year mortgages and prior-year mortgages) purchased by a GSE in a particular year are assigned to the year of GSE purchase. The approach of including a GSE's purchases of both "current-year" and "prior-year" mortgages gives the GSE full credit for their purchase activity in the year that the purchase actually takes place; this approach is also consistent with the statutory requirement for measuring GSE performance under the housing goals. However, this approach results in an

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[184] Freddie Mac's underserved area figure for 2002 showed a particularly large discrepancy—as shown in Table 4.6, Freddie Mac reported that 25.0 percent of the current-year loans it purchased during 2002 financed properties in underserved areas, a figure much higher than the 21.4 percent that HMDA reported as underserved area loans sold to Freddie Mac during 2002. This is the largest discrepancy in Table 4.6, and it is not clear what explains it. This downward bias for HMDA data, is the opposite of that suggested by Berkovec and Zorn, who argued that affordability percentages from HMDA data are biased upward.

[185] The data in Table 4.7 that support Berkovec and Zorn are the 1993-95 special affordable and low-mod data (particularly for Freddie Mac) that show HMDA over reporting percentages by more than a half percentage point. Otherwise, the data in Table 4.7, as well as Table 4.6, do not present a picture of HMDA's having an upward bias in reporting targeted loans. In fact, the recent years' data suggest a downward bias in HMDA's reporting of targeted loans..

[186] Of course, on an individual year basis, the GSEs' current-year data can differ significantly from the HMDA-reported data on GSE purchases. The other annual data reported in Table 4.6 show a mixture of results—in some cases the HMDA percentage is larger than the GSE "current year" percentage (e.g., Fannie Mae's special affordable purchases in 2000) while in other cases the HMDA percentage is smaller than the GSE current year percentage (e.g., Freddie Mac's underserved areas purchases in recent years). As noted in the text, the differential is typically in the opposite direction to that predicted by Berkovec and Zorn, particularly on the underserved areas category..

[187] Table 4.7 also includes aggregates for the more recent period, 1999-2002. The ratios of HMDA-reported-to-GSE-reported averages for this sub-period are similar to those reported for 1996-2002.

Table 4.7

HMDA Versus GSE Reporting of GSE Loan Characteristics
Single-Family-Owner Home Loans in Metropolitan Areas, 1993-2002

Borrower and Tract Characteristics	Fannie Mae			Freddie Mac		
	GSE-Reported Current-Year Loan Purchases	HMDA-Reported GSE Purchases	Ratio: HMDA-Reported/ GSE Reported	GSE-Reported Current-Year Loan Purchases	HMDA-Reported GSE Purchases	Ratio: HMDA-Reported/ GSE Reported
Special Affordable						
1993-1995	9.9	10.2	1.03	8.0	8.6	1.08
1996-2002	13.0	12.7	0.98	12.4	11.9	0.96
1999-2002	14.1	13.9	0.99	13.9	13.2	0.95
Less than Area Median Income						
1993-1995	36.8	37.2	1.01	33.0	33.9	1.03
1996-2002	41.0	40.9	1.00	39.6	39.2	0.99
1999-2002	42.6	42.6	1.00	41.9	41.2	0.98
Underserved Areas						
1993-1995	22.0	21.1	0.96	18.8	18.6	0.99
1996-2002	22.4	21.9	0.98	21.0	19.5	0.93
1999-2002	23.1	22.6	0.98	22.1	20.3	0.92

Source: The Fannie Mae and Freddie Mac "current year" data include information on their purchases of home loan originated in the same year they acquired the loans. The data are from the loan-level data that they provide to HUD. All mortgages are conventional conforming mortgages. The "HMDA-Reported" data include information on conventional conforming loans sold to the GSEs as reported by lenders in HMDA. Loans with a loan-to-income ratio greater than six are excluded from the borrower income calculations. Special affordable includes very low-income borrowers and low-income borrowers in low-income census tracts. Data with missing values are excluded.

obvious "apples to oranges" problem with respect to the HMDA-based market data, which include only newly-originated mortgages (i.e., current-year mortgages). To place the GSE and market data on an "apples to apples" basis, HUD has also used an alternative approach that expresses the GSE annual data on an origination-year basis. In this case, all purchases by a GSE in any particular year would be fully reported but they would be allocated to the year that they were originated, rather than to the year they were purchased. Under this approach, a GSE's data for the year 2000 would not only include that GSE's purchases during 2000 of newly-originated mortgages but also any year-2000-originations purchased in later years (i.e., during 2001 and 2002 in this analysis). This approach places the GSE and the market data on a consistent, current-year basis. In the above example, the market data would present the income and underserved area characteristics of mortgages originated in 2000, and the GSE data would present the same characteristics of all year-2000-mortgages that the GSE has purchased to date (i.e., through year 2002).[188]

Below, results will be presented for both the purchase-year and origination-year approaches. Following past HUD studies that have compared GSE performance with the primary market, most of the analysis in this section reports the GSE data on a purchase-year basis; however, the main results are repeated with the GSE data reported on an origination-year basis. This allows the reader to compare any differences in findings about how well the GSEs have been doing relative to the market.

C. Affordable Lending by the GSEs: Home Purchase Loans

This section compares the GSEs' affordable lending performance with the primary market for the years 1993-2002. The analysis in this section begins by presenting the GSE data on a purchase-year basis. As discussed above, the GSE data that are reported to HUD include their purchases of mortgages originated in prior years as well as their purchases of mortgages originated during the current year. The market data reported by HMDA include only mortgages originated in the current year. This means that the GSE-versus-market comparisons are defined somewhat inconsistently for any particular calendar year. Each year, the GSEs have newly-originated loans available for purchase, but they can also purchase loans from a large stock of seasoned (prior-year) loans currently being held in the portfolios of depository lenders. One method for making the purchase-year data more consistent is to aggregate the data over several years, instead of focusing on annual data. This provides a clearer picture of the types of loans that have been originated and are available for purchase by the GSEs. This approach is taken in Table 4.8, which is discussed below. Another method for making the GSE and market data

[188] Under the origination-year approach, GSE performance for any specific origination year (say year 2000) at the end of a particular GSE purchase year (say year 2002) is subject to change in the future years. Table 4.11 (in Section C.4 below) reports that 13.7 percent of year-2000 mortgage originations that Fannie Mae purchased through year 2002 qualify as special affordable; the special affordable share for the market was 16.8 percent in 2000, which indicates that, to date, Fannie Mae has lagged the primary market in funding special affordable mortgages originated during 2000. However, Fannie Mae's special affordable performance could change in the future as Fannie Mae continues to purchase year-2000 originations during 2003 and the following years. Of course, whether Fannie Mae's future purchases result in it ever leading the 2000-year market is not known at this time.

Table 4.8

GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase Mortgages, 1993-2002

Borrower and Tract Characteristics	Fannie Mae	Freddie Mac	Ratio Fannie Mae/ Freddie Mac	Depository Total	Depository Portfolio	Conforming Market W/O B&C	Ratio of GSE to Market (W/O B&C) Fannie Mae	Ratio of GSE to Market (W/O B&C) Freddie Mac
Special Affordable								
1993-2002	12.7 %	11.8 %	1.08	15.4 %	16.9 %	15.4 %	0.82	0.77
1993-1995	10.0	8.0	1.25	14.6	17.0	13.7	0.73	0.58
1996-2002	13.5	12.8	1.05	15.6	16.8	16.0	0.84	0.80
1999-2002	14.4	14.5	0.99	16.4	16.9	16.4	0.88	0.88
2000-2002	15.0	14.9	1.01	16.4	17.1	16.2	0.93	0.92
Less than Area Median Income								
1993-2002	40.2 %	38.3 %	1.05	42.8 %	43.3 %	43.0 %	0.93	0.89
1993-1995	36.7	32.8	1.12	41.8	44.0	40.8	0.90	0.80
1996-2002	41.2	39.8	1.04	43.1	43.0	43.6	0.94	0.91
1999-2002	42.5	42.3	1.00	44.2	43.1	44.3	0.96	0.95
2000-2002	43.2	42.7	1.01	44.2	43.3	44.2	0.98	0.97
Underserved Areas								
1993-2002	23.3 %	21.2 %	1.10	24.7	26.5	25.1 %	0.93	0.84
1993-1995	22.8	19.2	1.19	24.1	26.8	24.0	0.95	0.80
1996-2002	23.5	21.7	1.08	24.9	26.4	25.4	0.93	0.85
1999-2002	24.0	22.9	1.05	25.7	26.8	25.8	0.93	0.89
2000-2002	24.9	23.4	1.06	26.1	27.2	26.0	0.96	0.90

Source: The Fannie Mae and Freddie Mac data include information on all their purchases of home loans and are from the loan-level data that they provide to HUD. All mortgages are conventional conforming mortgages. The Depository and Conforming Market data are from HMDA; loans with a loan-to-income ratio greater than six are excluded from the borrower income calculations. "Total Depositories" data are loans originated by HMDA reporters regulated by FDIC, OTS, OCC, FRB, and the National Credit Union Administration; they consist mainly of banks, thrifts, and their subsidieries. The "Depository Portfolio" data refer to new originations that are not sold by banks and thrift institutions and thus are retained in depository portfolios. "Conforming Market W/O B&C" data are the average market percentages after deducting estimates of B&C loans (see text for explanation). Special affordable includes very low-income borrowers and low-income borrowers in low-income census tracts. Data with missing values are excluded.

consistent is to express the GSE data on an origination-year basis; that approach is taken in Table 4.11, which is discussed after presenting the annual results on a purchase-year basis.

C.1 Longer-Term Performance, 1993-2002 and 1996-2002

Table 4.8 summarizes the funding of goals-qualifying mortgages by the GSEs, depositories and the conforming market for the ten-year period between 1993 and 2002. Data are also presented for two important sub-periods: 1993-95 (for showing how much the GSEs have improved their performance since the early-to-mid 1990s); and 1996-2002 (for analyzing their performance since the current definitions of the housing goals were put into effect). Given the importance of the GSEs for expanding homeownership, this section focuses on home purchase mortgages, and the next section will examine first-time homebuyer loans. Section D below will briefly discuss the GSEs' overall performance, including refinance and home purchase loans. Several points stand out concerning the affordable lending performance of Freddie Mac and Fannie Mae over the two longer-term periods, 1993-2002 and 1996-2002.

Freddie Mac lagged both Fannie Mae and the primary market in funding affordable home loans in metropolitan areas between 1993 and 2002. During that period, 11.8 percent of Freddie Mac's mortgage purchases were for special affordable (mainly very-low-income) borrowers, compared with 12.7 percent of Fannie Mae's purchases, 15.4 percent of loans originated by depositories,[189] and 15.4 percent of loans originated in the conforming market without B&C loans.[190]

Although Freddie Mac consistently improved its performance during the 1990s, a similar pattern characterized the 1996-2002 period. During that period, 39.8 percent of Freddie Mac's purchases were for low- and moderate-income borrowers, compared with 41.2 percent of Fannie Mae's purchases, 43.1 percent of loans originated by depositories, and 43.6 percent of loans originated in the conventional conforming market. Over the same period, 21.7 percent of Freddie Mac's purchases financed properties in underserved neighborhoods, compared with 23.5 percent of Fannie Mae's purchases, 24.9 percent of depository originations, and 25.4 percent of loans originated in the primary market.

Fannie Mae's affordable lending performance was better than Freddie Mac's over the 1993 to 2002 period as well as during the 1996 to 2002 period. However, Fannie Mae lagged behind depositories and the overall market in funding affordable loans during both of these periods (see above paragraph). Between 1996 and 2002, the "Fannie Mae-to-market" ratio was only 0.84 on the special affordable category, obtained by dividing Fannie Mae's performance of 13.5 percent by the market's performance of 16.0 percent. Fannie Mae's market ratio was 0.94 on the low-mod category and 0.93 on the underserved area category. The "Freddie Mac-to-

[189] As shown in Table 4.8, the depository percentage is higher (16.9 percent) if the analysis is restricted to those newly-originated loans that depositories do not sell (the latter being a proxy for loans held in depositories' portfolios). Note that during the recent, 1999-to-2002 period (also reported in Table 4.8), there is less difference between the two depository figures.

[190] Unless stated otherwise, the market in this section is defined as the conventional conforming market without estimated B&C loans.

market" ratios were lower—0.80 for special affordable, 0.91 for low-mod, and 0.85 for underserved areas.

The above analysis has defined the market to exclude B&C loans, which HUD believes is the appropriate market definition. However, to gauge the sensitivity of the results to how the market is defined, Table 4.9 shows the effects on the market percentages for different definitions of the conventional conforming market, such as excluding manufactured housing loans, small loans, and all subprime loans (i.e., the A-minus portion of the subprime market as well as the B&C portion). For example, the average special affordable (underserved area) market percentage for 1996-2002 would fall by about 0.2 (0.6) percentage point if the remaining subprime loans (i.e., the A-minus loans) were also excluded from the market totals. Excluding manufactured housing loans in metropolitan areas would reduce the above market percentage for special affordable (underserved area) loans by 1.5 (1.1) percentage points. The above findings with respect to the GSEs' longer-term performance are not much affected by the choice of market definition.

C.2 Recent Performance, 1999-2002

This and the next subsection focus on the average data for 1999-2002 in Table 4.8 and the annual data reported in Tables 4.9 and 4.10. As explained below, the annual data are useful for showing shifts in the relative positions of Fannie Mae and Freddie Mac that began in 1999, and for highlighting the improvements made by Fannie Mae during 2001 and 2002 (which were the first two years under HUD's higher goal levels) and by Freddie Mac during 2002. Between 1993 and 1998, Freddie Mac's performance fell below Fannie Mae's, but a sharp improvement in Freddie Mac's performance during 1999 pushed it pass Fannie Mae on all three goals-qualifying categories. In 2000, Fannie Mae improved its underserved areas performance enough to surpass Freddie Mac on that category, while Freddie Mac continued to out-perform Fannie Mae on the borrower-income categories (special affordable and low-mod). During 2001 and 2002, Fannie Mae improved its performance enough to surpass Freddie Mac on all three goals-qualifying categories and to essentially match the market during these two years.

Consider first the average data for 1999-2002 reported in Table 4.8. During this recent period, Freddie Mac's average performance was similar to Fannie Mae's performance for the borrower income categories. Between 1999 and 2002, 14.5 percent of Freddie Mac's purchases and 14.4 percent Fannie Mae's mortgage purchases consisted of special affordable loans, compared with a market average of 16.4 percent. In addition, Freddie Mac purchased low-mod loans at about the same rate as Fannie Mae during this period—42.3 percent for the Freddie Mac, 42.5 percent for Fannie Mae, and 44.3 percent for the market. Freddie Mac (22.9 percent) purchased underserved area loans at a lower rate than Fannie Mae (24.0 percent) and the primary market (25.8 percent). As these figures indicate, both Fannie Mae and Freddie Mac continued to lag the market during this recent four-year period. Both GSEs' market ratios were 0.88 for special affordable loans and approximately 0.95 for low-mod loans. Although less than one (where one indicates equal performance with the market), the "Fannie Mae-to-market" ratio (0.93) for the underserved area category was higher than the "Freddie Mac-to-market" ratio (0.89).

Table 4.9

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase Mortgages, 1996-2002
Various Market Definitions

	Fannie Mae Purchases	Freddie Mac Purchases	Conventional Conforming Market Originations: Total Market	W/O Mfg Loans Only	W/O Loans Less Than $15K	W/O Mfg and Less Than $15K Loans	W/O Subprime Loans	W/O B&C Loans	W/O B&C and Mfg Loans	W/O B&C and LT $15K Loans	W/O B&C and LT $15K W/O Mfg
Special Affordable											
1996	10.4	8.8	15.0	13.3	14.2	12.8	15.0	15.0	13.3	14.2	12.8
1997	11.7	9.2	15.3	13.5	14.6	13.0	15.3	15.2	13.4	14.5	12.9
1998	13.2	11.5	15.6	13.7	15.0	13.4	15.2	15.4	13.4	14.9	13.1
1999	12.5	12.8	17.3	15.3	16.8	15.0	16.7	17.0	14.9	16.5	14.6
2000	13.3	14.7	17.1	15.6	16.5	15.3	16.4	16.8	15.2	16.2	14.9
2001	14.9	14.4	15.8	14.9	15.5	14.6	15.5	15.6	14.7	15.3	14.4
2002	16.3	15.8	16.4	16.0	16.1 **?**	15.8	16.2	16.3	15.9	16.0	15.7
1996-2002	13.5	12.8	16.1	14.7	15.6	14.4	15.8	16.0	14.5	15.5	14.2
1999-2002	14.4	14.5	16.6	15.5	16.2	15.2	16.2	16.4	15.2	16.0	14.9
2000-2002	15.0	14.9	16.4	15.5	16.0	15.2	16.0	16.2	15.3	15.8	15.0
Less Than Area Median Income											
1996	37.0	33.7	42.2	40.0	41.4	39.4	42.2	42.2	39.9	41.4	39.4
1997	38.3	34.7	42.5	40.1	41.8	39.6	42.4	42.5	40.0	41.7	39.5
1998	40.8	37.6	43.0	40.7	42.5	40.3	42.7	42.8	40.4	42.3	40.0
1999	40.0	40.8	45.2	42.9	44.7	42.5	44.4	44.8	42.4	44.3	42.0
2000	40.8	42.7	44.8	43.0	44.1	42.6	43.9	44.4	42.5	43.8	42.1
2001	42.9	41.3	43.2	42.0	42.7	41.6	42.7	42.9	41.8	42.5	41.3
2002	45.3	44.0	45.3	44.9	45.0	44.5	45.0	45.2	44.7	44.8	44.4
1996-2002	41.2	39.8	43.9	42.2	43.3	41.7	43.4	43.6	41.9	43.1	41.4
1999-2002	42.5	42.3	44.6	43.2	44.1	42.8	44.0	44.3	42.9	43.8	42.5
2000-2002	43.2	42.7	44.4	43.4	43.9	42.9	43.9	44.2	43.1	43.7	42.7
Underserved Areas											
1996	22.3	19.6	25.0	23.5	24.5	23.1	24.8	24.9	23.4	24.5	23.0
1997	23.0	19.7	25.2	23.7	24.8	23.3	24.7	24.9	23.4	24.5	23.1
1998	22.7	19.8	24.6	23.1	24.3	22.8	23.6	24.2	22.5	23.8	22.3
1999	20.4	20.9	25.8	24.4	25.5	24.1	24.6	25.2	23.7	24.9	23.5
2000	23.4	22.0	27.1	26.1	26.8	25.8	25.6	26.4	25.3	26.8	25.0
2001	24.4	22.3	25.8	25.2	25.5	24.9	24.6	25.2	24.5	24.9	24.2
2002	26.7	25.8	27.2	27.0	27.0	26.7	25.6	26.4	26.2	26.2	25.9
1996-2002	23.5	21.7	25.9	24.9	25.6	24.6	24.8	25.4	24.3	25.0	24.0
1999-2002	24.0	22.9	26.5	25.7	26.2	25.4	25.1	25.8	25.0	25.5	24.7
2000-2002	24.9	23.4	26.7	26.1	26.4	25.8	25.3	26.0	25.4 **?**	25.7	25.1

Source: The Fannie Mae and Freddie Mac percentages for 1996 to 2002 are based on the loan-level mortgage purchase data that they provide to HUD. All mortgages are conventional conforming home purchase mortgages. The Conforming Market data are from HMDA; loans with a loan-to-income-ratio greater than six are excluded from all borrower income calculations. See the text for an explanation of the adjustments for manufactured housing (mfg), subprime, and B&C loans. Special affordable includes very low-income borrowers and low-income borrowers living in low-income census tracts. Data with missing values are excluded.

Table 4.10

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas Goal-Qualifying Home Purchase Mortgages, 1992-2002

	Fannie Mae	Freddie Mac	Ratio of Fannie Mae to Freddie Mac	Conforming Market (W/O B&C Loans)	Ratio of GSE to Market (W/O B&C) Fannie Mae	Freddie Mac
Special Affordable						
1992	6.3 %	6.5 %	0.97	10.4 %	0.61	0.63
1993	8.2	7.3	1.12	12.6	0.65	0.58
1994	10.7	8.2	1.30	14.1	0.76	0.58
1995	11.4	8.4	1.36	14.4	0.79	0.58
1996	10.4	8.8	1.18	15.0	0.69	0.59
1997	11.7	9.2	1.27	15.2	0.77	0.61
1998	13.2	11.5	1.15	15.4	0.86	0.75
1999	12.5	12.8	0.98	17.0	0.74	0.75
2000	13.3	14.7	0.90	16.8	0.79	0.88
2001	14.9	14.4	1.03	15.6	0.96	0.92
2002	16.3	15.8	1.03	16.3	1.00	0.97
Less Than Area Median Income						
1992	29.2	28.7	1.02	34.4	0.85	0.83
1993	33.5	31.9	1.05	38.9	0.86	0.82
1994	38.8	33.7	1.15	41.8	0.93	0.81
1995	38.3	32.8	1.17	41.4	0.93	0.79
1996	37.0	33.7	1.10	42.2	0.88	0.80
1997	38.3	34.7	1.10	42.5	0.90	0.82
1998	40.8	37.6	1.09	42.8	0.95	0.88
1999	40.0	40.8	0.98	44.8	0.89	0.91
2000	40.8	42.7	0.96	44.4	0.92	0.96
2001	42.9	41.3	1.04	42.9	1.00	0.96
2002	45.3	44.0	1.03	45.2	1.00	0.97
Underserved Areas						
1992	18.3	18.6	0.98	22.2	0.82	0.84
1993	20.3	18.2	1.12	21.9	0.93	0.83
1994	24.2	19.6	1.23	24.3	1.00	0.81
1995	24.6	19.9	1.24	25.4	0.97	0.78
1996	22.3	19.6	1.14	24.9	0.90	0.79
1997	23.0	19.7	1.17	24.9	0.92	0.79
1998	22.7	19.8	1.15	24.2	0.94	0.82
1999	20.4	20.9	0.98	25.2	0.81	0.83
2000	23.4	22.0	1.06	26.4	0.89	0.83
2001	24.4	22.3	1.09	25.2	0.97	0.88
2002	26.7	25.8	1.03	26.4	1.01	0.98

Source: The Fannie Mae and Freddie Mac percentages for 1993 to 2002 are from the loan-level mortgage purchase data that they provide to HUD; the 1992 GSE data are from HMDA. All mortgages are conventional conforming home purchase mortgages. The Conforming Market data are from HMDA; see text for an explanation of the market adjustment for B&C loans. Loans with a loan-to-income-ratio greater than six are excluded from the borrower income calculations. Special affordable includes very low-income borrowers and low-income borrowers living in low-income census tracts. Data with missing values are excluded.

Fannie Mae had an uncharacteristically poor year in 1999. Thus, averages for 2000-2002 are also presented in Table 4.8, dropping 1999. These data show an increase in Fannie Mae's performance relative to the market, particularly on the special affordable and underserved areas categories. Between 2000 and 2002, special affordable (underserved area) loans accounted for 15.0 percent (24.9 percent) of Fannie Mae's purchases, compared with 16.2 percent (26.0 percent) for the market.

Table 4.9 shows the effects on the market percentages for 1999-2002 (as well as 2000-2002) of different definitions of the conventional conforming market. Excluding manufactured housing loans (as well as B&C loans) in metropolitan areas would reduce the 1999-2002 market percentage for special affordable loans from 16.4 percent to 15.2 percent, which would raise the GSEs' market ratios from approximately 0.88 to 0.95. Similarly, excluding manufactured housing loans would reduce the 1999-2002 market percentage for underserved areas from 25.8 percent to 25.0 percent, which would raise Fannie Mae's market ratio from 0.93 to 0.96 and Freddie Mac's, from 0.89 to 0.92. As shown in Table 4.9, Fannie Mae is even closer to the market averages if the year 1999 is dropped—over the 2000-2002 period, Fannie Mae's performance on the underserved area category is practically at market levels under the alternative definitions of the market, and its performance on the special affordable and low-mod categories to close to market levels.

C.3 GSEs' Performance—Annual Data

Freddie Mac's Annual Performance. As shown by the annual data reported in Table 4.10, Freddie Mac significantly improved its purchases of goals-qualifying loans during the 1990s. Its purchases of loans for special affordable borrowers increased from 6.5 percent of its business in 1992 to 9.2 percent in 1997, and then jumped to 14.7 percent in 2000 before falling slightly to 14.4 percent in 2001 and rising again to 15.8 percent in 2002. The underserved areas share of Freddie Mac's purchases increased at a more modest rate, rising from 18.6 percent in 1992 to 22.3 percent by 2001; it then jumped to 25.8 percent in 2002.

With its improved performance, Freddie Mac closed its gap with the market in funding goals-qualifying loans. In 2002, special affordable loans accounted for 15.8 percent of Freddie Mac's purchases and 16.3 percent of loans originated in the conventional conforming market, which produces a "Freddie Mac-to-market" ratio of 0.97 (15.8 divided by 16.3). Table 4.10 shows the trend in the "Freddie Mac-to-market" ratio from 1992 to 2002 for each of the goals-qualifying categories. For the special affordable and low-mod categories, Freddie Mac's performance relative to the market remained flat (at approximately 0.60 and 0.80, respectively) through 1997; by 2002, the "Freddie Mac-to-market" ratios had risen to 0.97 for both the special affordable and low-mod categories.

Surprisingly, Freddie Mac did not make much progress during the 1990s closing its gap with the market on the underserved areas category. The "Freddie Mac-to-market" ratio for underserved areas was approximately the same in 2000 (0.83) as it was in 1992 (0.84). While it rose to 0.88 in 2001, that was due more to a decline in the market level than to an improvement in Freddie Mac's performance. However, due to a substantial increase in Freddie Mac's underserved area percentage from 22.3 percent in 2001 to 25.8 percent in 2002, Freddie Mac's performance approached market performance (26.4 percent) during 2002.[191] In the ten years under the housing goals, the year 2002 represented the first time that Freddie Mac's performance in purchasing home loans in underserved areas had ever been within two percentage points of the market's performance.[192]

Fannie Mae's Annual Performance. With respect to purchasing affordable loans, Fannie Mae followed a different path than Freddie Mac. Fannie Mae improved its performance between 1992 and 1998 and made much more progress than Freddie Mac in closing its gap with the market. In fact, by 1998, Fannie Mae's performance was close to that of the primary market for some important components of affordable lending. In 1992, special affordable loans accounted for 6.3 percent of Fannie Mae's purchases and 10.4 percent of all loans originated in the conforming market, giving a "Fannie Mae-to-market" ratio of 0.61. By 1998, this ratio had risen to 0.86, as special affordable loans had increased to 13.2 percent of Fannie Mae's purchases and to 15.4 percent of market originations. A similar trend in market ratios can be observed for Fannie Mae on the underserved areas category. In 1992, underserved areas accounted for 18.3 percent of Fannie Mae's purchases and 22.2 percent of market originations, for a "Fannie Mae-to-market" ratio of 0.82. By 1998, underserved areas accounted for 22.8 percent of Fannie Mae's purchases and 24.2 percent of market originations, for a higher "Fannie Mae-to-market" ratio of 0.94.[193]

The year 1999 saw a shift in the above patterns, with Fannie Mae declining in overall performance while the share of goals-qualifying loans in the market increased. Between 1998 and 1999, the special affordable share of Fannie Mae's business declined from 13.2 percent to 12.5 percent while this type of lending in the market increased from 15.4 percent to 17.0 percent. For this reason, the "Fannie Mae-to-market" ratio for special affordable loans declined sharply from 0.86 in 1998 to 0.74 in 1999. The share of Fannie Mae's purchases in underserved areas also declined, from 22.7 percent in 1998 to 20.4 percent in 1999, which lowered the "Fannie Mae-to-market" ratio from 0.94 to 0.81.

After declining in 1999, Fannie Mae's performance rebounded in 2000, particularly on the underserved areas category. Fannie Mae's underserved areas percentage jumped by three percentage points from 20.4 percent in 1999 to 23.4 percent in 2000. The 2000 figure was similar to its level in 1997 but below Fannie Mae's peak performances of 24-25 percent during 1994 and 1995. Between 1999 and 2000, the "Fannie Mae-to-market" ratio for underserved

[191] Table 4.9 reports annual market percentages that exclude the effects of manufactured housing, small loans, and subprime loans. Freddie Mac's performance is closer to the market average under the alternative market definitions, particularly during 2001 and 2002.

[192] Prior to 2002, Freddie Mac's performance on the underserved areas category had not approached the market even under the alternative market definitions reported in Table 4.9.

[193] Freddie Mac, on the other hand, fell further behind the market during this period. In 1992, Freddie Mac had a slightly higher underserved areas percentage (18.6 percent) than Fannie Mae (18.3 percent). However, Freddie Mac's underserved areas percentage had only increased to 19.8 percent by 1998 (versus 22.7 percent for Fannie Mae). Thus, the "Freddie Mac-to-market" ratio fell from 0.84 in 1992 to 0.82 in 1998.

areas increased from 0.82 to 0.89. Fannie Mae improved its performance on the special affordable goal at a more modest rate. Fannie Mae's special affordable percentage increased by 0.8 percentage points from 12.5 percent in 1999 to 13.3 percent in 2000. The 2000 figure was similar to its previous peak level (13.2 percent) in 1998). The "Fannie Mae-to-market" ratio for special affordable loans increased from 0.74 in 1999 to 0.79 in 2000, with the latter figure remaining below Fannie Mae's peak market ratio (0.86) in 1998.

Fannie Mae continued its improvement in purchasing targeted home loans during 2001, at a time when the conventional conforming market was experiencing a decline in affordable lending, and again in 2002, at a time when the conventional conforming market was increasing enough to return approximately to its year-2000 level. Thus, during the 2000-to-2002 period, Fannie Mae significantly improved its targeted purchasing performance while the primary market originated targeted home loans at about the same rate in 2002 as it did in 2000. As a result, Fannie Mae's performance during 2001 approached the market on the special affordable and underserved area categories and matched the market on the low-mod category. In 2002, Fannie Mae matched the market on the special affordable category, and slightly outperformed the market on the low-mod and underserved areas categories.

As shown in Table 4.10, Fannie Mae increased its special affordable percentage by 1.6 percentage points, from 13.3 percent in 2000 to 14.9 percent in 2001, and then increased it further to 16.3 percent in 2002, the latter being the same as the market's performance of 16.3 percent. The "Fannie Mae-to-market" ratio for special affordable loans jumped from 0.79 in 2000 to 1.00 in 2002. Between 2000 and 2001, Fannie Mae increased its low-mod percentage from 40.8 percent to 42.9 percent at the same time that the low-mod share of the primary market was falling from 44.4 percent to 42.9 percent, placing Fannie Mae at the market's performance in 2001. During 2002, the low-mod share of Fannie Mae's purchases of home loans increased further to 45.3 percent, placing Fannie Mae 0.1 percentage point above the market performance of 45.2 percent. Fannie Mae increased its underserved area percentage from 23.4 percent in 2000 to 24.4 in 2001 percent while the underserved area share of the primary market was falling from 26.4 percent to 25.2 percent, placing Fannie Mae at less than one percentage point from the market's performance. The "Fannie Mae-to-market" ratio for underserved area loans was 0.97 in 2001. During 2002, the underserved area share of Fannie Mae's purchases of home loans increased further to 26.7 percent, placing Fannie Mae slightly ahead of market performance (26.4 percent).

Table 4.9 reports Fannie Mae's 2001 and 2002 performance under alternative definitions of the primary market. As shown there, the above results of Fannie Mae's improvement relative to the market during 2001 and 2002 are further reinforced when lower market percentages are used.

Changes in the "Fannie Mae-to-Freddie Mac" Performance Ratio. The above discussion documents shifts in the relative performance of Fannie Mae and Freddie Mac over the past few years. To highlight these changing patterns, Table 4.10 reports the ratio of Fannie Mae's performance to Freddie Mac's performance for each goals category for the years 1992 to 2002. As shown there, the "Fannie Mae-to-Freddie Mac" ratio for the special affordable category increased from approximately one in 1992 (indicating equal performance) to over 1.3

during the 1994-97 period, indicating that Fannie Mae clearly out-performed Freddie Mac during this period. Between 1997 and 2000, Freddie Mac substantially increased its special affordable share (from 9.2 percent to 14.7 percent), causing the "Fannie Mae-to-Freddie Mac" ratio to fall from 1.27 in 1997 to 0.90 in 2000 (indicating Freddie Mac surpassed Fannie Mae). But Fannie Mae's stronger performance during 2001 and 2002 returned the ratio to above one (1.03 in both years), indicating slightly better performance for Fannie Mae (e.g., 16.3 percent in 2002 versus 15.8 percent for Freddie Mac). The "Fannie Mae-to-Freddie Mac" performance ratio for low-mod loans followed a similar pattern, standing at 1.03 in 2002 (45.3 percent for Fannie Mae versus 44.0 percent for Freddie Mac).

Prior to 2000, the "Fannie Mae-to-Freddie Mac" ratio for underserved areas had also followed a pattern similar to that outlined above for special affordable loans, but at a lower overall level—rising from about one in 1992 (indicating equal performance) to approximately 1.2 during the 1994-97 period, before dropping to slightly below one (0.98) in 1999. However, Fannie Mae increased its underserved areas percentage from 20.4 percent in 1999 to 24.4 percent in 2001 while Freddie Mac only increased its percentage from 20.9 percent to 22.3 percent. This resulted in the "Fannie Mae-to-Freddie Mac" ratio rising from 0.98 in 1999 to 1.09 in 2001. But during 2002, Freddie Mac's underserved area percentage jumped by 3.5 percentage points to 25.8 percent, while Fannie Mae's increased at a more modest rate (by 2.3 percentage points) to 26.7 percent, with the result being that the"Fannie Mae-to-Freddie Mac" ratio for underserved area loans fell from 1.09 in 2001 to 1.03 in 2002.

To conclude, while Freddie Mac ended the 1990s on a more encouraging note than Fannie Mae, the past three years (2000, 2001, and 2002) have seen a substantial improvement in Fannie Mae's performance on all three goals-qualifying categories. Fannie Mae ended the 1990s with a decline in affordable lending performance at the same time that Freddie Mac was improving and the share of goals-qualifying loans was increasing in the market. Both GSEs' performance during 2000 was encouraging—Freddie Mac continued to improve, particularly with respect to the borrower-income categories, while Fannie Mae reversed its declining performance, particularly with respect to underserved areas. During 2000, Freddie Mac outperformed Fannie Mae on the special affordable and low-mod categories, while Fannie Mae purchased a higher percentage of loans in underserved areas. During 2001, Fannie Mae continued to improve its performance while Freddie Mac's performance remained about the same and the market's originations of affordable loans declined somewhat. The result was that during 2001 Fannie Mae outperformed Freddie Mac on all three goals-qualifying categories, and even matched the market on the low-mod category. During 2002, both Fannie Mae and Freddie Mac again improved their performance; Fannie Mae continued to outperform Freddie Mac and even matched the market on the special affordable category and slightly outperformed the market on the low-mod and underserved area categories. While Freddie Mac lagged the market on all three goals-qualifying categories during 2002, it had significantly closed its gap with the market by the end of 2002, particularly on the underserved area category.

GSE Purchases of Seasoned Loans. When the GSE data are expressed on a purchase-year basis (as in the above analysis), one factor which affects each GSE's performance concerns their purchases of seasoned (prior-year) loans. As shown in Table 4.6, Fannie Mae followed a strategy of purchasing targeted seasoned loans between 1996 and 1998, and again during the past three years—all years when Fannie Mae improved its overall affordable lending performance. For example, consider Fannie Mae's underserved area performance of 24.4 percent during 2001, which was helped by its purchases of seasoned mortgages on properties located in underserved neighborhoods. The underserved area percentage for Fannie Mae's purchases of newly-originated (current-year) mortgages was only 23.3 percent in 2001, or 1.9 percentage points below the market average of 25.2 percent. Fannie Mae obtained its higher overall percentage (24.4 percent) by purchasing seasoned loans with a particularly high concentration (28.3 percent) in underserved areas. Similarly, during 2001, the special affordable share of Fannie Mae's purchases of newly-originated mortgages was only 14.2 percent, or 1.4 percentage points below the market average of 15.6 percent. Again, Fannie Mae improved its overall performance by purchasing seasoned loans with a high percentage (18.1) of special affordable loans, enabling Fannie Mae to reduce its gap with the market to 0.7 percentage points—14.9 percent versus 15.6 percent.

As shown in Table 4.6, Freddie Mac also followed a strategy of purchasing seasoned special affordable loans mainly during 2000 and 2001. Prior to 2000, Freddie Mac had not pursued such a strategy, or at least not to the same degree as Fannie Mae. During the 1997-99 period, Freddie Mac's purchases of prior-year mortgages and newly-originated mortgages had similar percentages of special affordable (and low-mod) borrowers. Over time, there have been small differentials between Freddie Mac's prior-year and newly-originated mortgages for the underserved areas category but they have been smaller than the differentials for Fannie Mae (see Table 4.6).

C.4 GSEs' Annual Purchases of Home Loans—Origination-Year Basis

Table 4.11 reports GSE purchase data for 1996 to 2002 on an origination-year basis. Recall that in this case, mortgages purchased by a GSE in any particular calendar year are allocated to the year that the mortgage was originated, rather than to the year that the mortgage were purchased (as in subsections C.1-C.3 above). This approach places the GSE and the market data on a consistent, current-year basis, as explained earlier.

In general, the comparisons of Freddie Mac's and the market's performance are similar to those discussed in subsections C.1-C.3 above, except for some differences on the special affordable category. The "Freddie Mac to market" ratios in Table 4.11 show that Freddie Mac has improved its performance but has also consistently lagged the primary market in funding mortgages covered by the housing goals.

The "Fannie Mae to market" ratios in Table 4.11 show that Fannie Mae has improved its performance, and has generally outperformed Freddie Mac, but has lagged the primary market in funding mortgages covered by the housing goals. Under the origination-year approach, Fannie Mae lagged the market on all three housing goal categories during 2001 and on the special affordable and underserved area categories during 2002. In 2002, low- and moderate-income loans accounted for 45.4 percent of Fannie Mae's purchases and 45.2 percent of the market originations, placing Fannie Mae 0.2 percentage points above the market.

Table 4.11

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase Mortgages
1996-2002 GSE Data Reported on an Origination-Year Basis[1]

Goals-Qualifying Category	Fannie Mae Purchases	Freddie Mac Purchases	Ratio of Fannie Mae to Freddie Mac	Conventional Conforming Market Originations (W/O B&C)	Ratio of GSE to Market (W/O B&C)	
					Fannie Mae	Freddie Mac
Special Affordable Borrower						
1996	11.5	9.4	1.22	15.0	0.77	0.63
1997	11.2	10.0	1.12	15.2	0.74	0.66
1998	12.3	12.2	1.01	15.4	0.80	0.79
1999	13.1	14.0	0.94	17.0	0.77	0.82
2000	13.7	14.0	0.98	16.8	0.82	0.83
2001	14.4	13.5	1.07	15.6	0.92	0.87
2002[2]	15.8	15.8	1.00	16.3	0.97	0.97
1996-2002	13.3	12.9	1.03	16.0	0.83	0.81
1999-2002	14.3	14.3	1.00	16.4	0.87	0.87
2000-2002	14.7	14.4	1.02	16.2	0.91	0.89
Less Than Area Median Income Borrower						
1996	38.5	34.5	1.12	42.2	0.91	0.82
1997	37.9	35.7	1.06	42.5	0.89	0.84
1998	39.7	38.8	1.02	42.8	0.93	0.91
1999	41.0	42.3	0.97	44.8	0.92	0.94
2000	41.4	41.3	1.00	44.4	0.93	0.93
2001	42.3	40.6	1.04	42.9	0.99	0.95
2002[2]	45.4	44.4	1.02	45.2	1.00	0.98
1996-2002	41.2	40.0	1.03	43.6	0.94	0.92
1999-2002	42.6	42.1	1.01	44.3	0.96	0.95
2000-2002	43.1	42.1	1.02	44.2	0.98	0.95
Underserved Areas						
1996	23.3	19.6	1.19	24.9	0.94	0.79
1997	21.8	19.7	1.11	24.9	0.88	0.79
1998	21.2	20.0	1.06	24.2	0.88	0.83
1999	21.3	21.5	0.99	25.2	0.85	0.85
2000	23.4	22.2	1.05	26.4	0.89	0.84
2001	23.8	22.4	1.06	25.2	0.94	0.89
2002[2]	25.5	25.0	1.02	26.4	0.97	0.95
1996-2002	23.0	21.6	1.06	25.4	0.91	0.85
1999-2002	23.6	22.8	1.04	25.8	0.91	0.88
2000-2002	24.3	23.2	1.05	26.0	0.93	0.89

Source: See text and notes to previous tables for variable definitions and market methodology.

[1] In this table, GSE data are reported on an “origination-year” basis rather than on a “purchase-year” basis (as are the previous tables on home purchase loans). This means that prior-year loans that the GSEs purchase in a particular calendar year are allocated back to their year of origination. For example, mortgages originated in 2000 but purchased by the GSEs in 2002 would be allocated to 2000 (the year of origination). Thus, the GSE percentages for 2000 represent GSE purchases (in 2000 and in 2001 and in 2002) of mortgages originated in 2000. For this reason, the GSE data in this table are more consistent with the market data. Market percentages are for current-year mortgage originations, based on HMDA data.

[2] The data for 2002 represent only the GSEs' purchases during 2002 of mortgages originated during 2002, as there are not yet any prior-year originations to report. Of course, during 2003 (and during following years), the GSEs will purchase prior-year loans originated in 2002, which would at that time be incorporated into the data for the year 2002.

C.5 GSEs' Purchases of First-Time Homebuyer Mortgages—1999 to 2001

While not a specific housing goal category, mortgages for first-time homebuyers are an important component of the overall home loan market. Making financing available for first-time homebuyers is one approach for helping young families enter the homeownership market. Therefore, this section briefly compares the GSEs' funding of first-time homebuyer loans with that of primary lenders in the conventional conforming market.

During the past few years, the GSEs have increased their purchases of first-time homebuyer loans. Fannie Mae's annual purchases of first-time homebuyer loans increased from approximately 287,000 in 1999 to 373,000 in 2002, while Freddie Mac's annual purchases increased from 199,000 to 259,000 during the same period.[194] However, since 1999, the first-time homebuyer share of the GSEs' purchases of home loans has remained relatively flat, varying within the 25-28 percent range.[195]

Table 4.12 compares the first-time homebuyer share of GSE purchases with the corresponding share of home loans originated in the conventional conforming market. Readers are referred to Bunce and Gardner (2004) for the derivation of the estimates of first-time homebuyer market shares reported in Table 4.12. This analysis does not include year 2002 data because market data from the American Housing Survey are not yet available for that year. Between 1999 and 2001, first-time homebuyers accounted for 26.5 percent of Fannie Mae's purchases of home loans, 26.5 percent of Freddie Mac's, and 37.6 percent of home loans originated in the conventional conforming market. Thus, both Fannie Mae and Freddie Mac fell substantially short of the primary market in financing first-time homebuyers during this time period. The GSEs' performance was only 70.5% of market performance (26.5 percent divided by 37.6 percent).

Table 4.12 also reports first-time homebuyer shares for African-American and Hispanics and for all minorities. Between 1999 and 2001, African-American and Hispanic first-time homebuyers accounted for 4.0 percent of Fannie Mae's purchases of home loans, 3.4 percent of Freddie Mac's purchases, and 6.9 percent of home loans originated in the conventional conforming market. For this subgroup, Fannie Mae's performance is 58 percent of market performance, while Freddie Mac's performance is 49 percent of market performance.
The group of all minority first-time homebuyers accounted for 6.6 percent of Fannie Mae's purchases of home loans, 5.8 percent of Freddie Mac's purchases, and 10.6 percent of home loans originated in the conventional conforming market. In this case, Fannie Mae's performance is 62 percent of market performance, while Freddie Mac's performance is 55 percent of market performance.

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[194] These figures include estimates of first-time homebuyer loans for those home purchase loans with a missing first-time homebuyer indicator; the estimates were obtained by multiplying the GSE's first-time homebuyer share (based only on data with a first-time homebuyer indicator) by the number of loans with a missing first-time homebuyer indicator.

[195] The first-time homebuyer share for Fannie Mae was almost 35 percent between 1996 and 1998; it then dropped to 30 percent in 1998 and to 26 percent in 1999. The first-time homebuyer share for Freddie Mac was approximately 29 percent in 1996 and 1997 before dropping to about 25 percent in 1998 and 1999.

Table 4.12

First-Time Homebuyer Mortgages as a Share of All Conventional Conforming Home Purchase Mortgages, for GSEs' Purchases and Market Originations, 1999-2001 And 1996-2001 Averages

1999-2001 Averages	Fannie Mae	Freddie Mac	Both GSEs	Conventional Conforming Market
All First-Time Homebuyers	26.5%[1]	26.5%	26.5%	37.6%[3]
African-American and Hispanic First-Time Homebuyers	4.0%	3.4%	3.8%	6.9%
Minority First-Time Homebuyers	6.6%[2]	5.8%	6.2%	10.6%[4]
1996-2001 Averages				
All First-Time Homebuyers	29.3%	26.9%	28.3%	38.4%
African-American and Hispanic First-Time Homebuyers	4.3%	3.1%	3.8%	6.8%
Minority First-Time Homebuyers	6.9%	5.3%	6.3%	10.2%

Notes: These data cover the entire U.S. (i.e., both metropolitan and non-metropolitan areas).
The first-time homebuyer concept for the market analysis is homebuyers who have never owned a home.
The concept for the GSEs is purchasers who have not owned a home within the past three years. The market analysis is based on GSE, HMDA, and American Housing Survey data. See Bunce and Gardner (2004) for the methodology for estimating the market first-time homebuyer percentages. Because the percentages for the GSEs include seasoned loans and the market ratios include only current-year mortgage originations, the GSE ratios tend to overstate the GSEs' business shares in each category, compared to mortgage origination activity in a given year.

Interpretations:

[1] First-time homebuyer mortgages were 26.5% of all home purchase mortgages purchased by Fannie Mae in 1999-2001.

[2] Minority first-time homebuyer mortgages were 6.6% of all home purchase mortgages purchased by Fannie Mae in 1999-2001.

[3] First-time homebuyer mortgages were 37.6% of all home purchase mortgage originations in the conventional conforming market during 1999-2001.

[4] Minority first-time homebuyer mortgages were 10.6% of all home purchase mortgage origintions in the conventional conforming market during 1999-2001.

Appendix B to this chapter will continue this examination of first-time homebuyers by presenting market share analysis that estimates the GSEs' overall importance in the funding of first-time homebuyers.

D. GSEs Purchases of Total (Home Purchase and Refinance) Loans

Section C examined the GSEs' acquisitions of home purchase loans, which is appropriate given the importance of the GSEs for expanding homeownership opportunities. To provide a complete picture of the GSEs' mortgage purchases in metropolitan areas, Tables 4.13, 4.14, 4.15, and 4.16 report the GSEs' purchases of all single-family-owner mortgages, including both home purchase loans and refinance loans.[196]

Table 4.13 provides a long-run perspective on the GSEs' overall performance. Between 1993 and 2002, as well as during the 1996-2002 period, each GSE's performance was 80-86 percent of market performance for the special affordable category, 91-95 percent of market performance for the low-mod category, and 88-92 percent of market performance for the underserved areas category. For example, between 1996 and 2002, underserved areas accounted for 23.2 percent of Fannie Mae's purchases and 22.4 percent of Freddie Mac's purchases, compared with 25.5 percent for the conventional conforming market (without B&C loans). Similarly, for special affordable loans, both GSEs lagged the market during the 1996-2002 period—Fannie Mae and Freddie Mac averaged approximately 13.0 percent while the market was over two percentage points higher at 15.2 percent.

Similar to the patterns discussed for home purchase loans, Fannie Mae has tended to outperform Freddie Mac. This can be seen by examining the various "Fannie Mae-to-Freddie Mac" ratios in Table 4.13, which are all equal to or greater than one.

Over the recent 1999-2002 period, Fannie Mae and Freddie Mac continued to lag the overall market on all three goals-qualifying categories. Special affordable (underserved area) loans averaged 13.8 (23.8) percent of Fannie Mae's purchases, 13.8 (23.1) of Freddie Mac's purchases, and 15.7 (25.7) percent of market originations. Considering both GSEs, the market ratio was 0.88 for special affordable loans, approximately 0.95 for low-mod loans, and slightly over 0.90 for underserved area loans. As with home purchase loans, dropping the year 1999 and characterizing recent performance by the 2000-2002 period improves the performance of both GSEs relative to the market, but particularly Fannie Mae. Over the 2000-2002 period, the "Fannie Mae-to-market" ratio was 0.93 for Special Affordable loans, 0.98 for low-mod loans, and 0.96 for underserved area loans.

The above analysis has defined the market to exclude B&C loans. Table 4.13 shows the effects on the market percentages of different definitions of the conventional conforming market. For example, the average 1999-2002 market share for special affordable (underserved areas) loans would fall to 15.1 (25.3) percent if manufactured housing loans in metropolitan areas were

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[196] The GSE total (home purchase and refinance) data in Tables 4.13-4.15 are presented on a purchase-year basis; Table 4.16 presents similar data on an origination-year basis.

Table 4.13

GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase and Refinance Mortgages, 1993-2002

Borrower and Tract Characteristics	Fannie Mae	Freddie Mac	Ratio of Fannie Mae to Freddie Mac	Conventional Conforming Market		Ratio of GSE to Market (W/O B&C)	
				Total	(W/O B&C Loans)	Fannie Mae	Freddie Mac
Special Affordable							
1993-2002	11.9 %	11.5 %	1.03	15.0 %	14.4 %	0.83	0.80
1993-1995	8.3	7.2	1.15	11.6	11.4	0.73	0.63
1996-2002	13.0	12.7	1.02	15.9	15.2	0.86	0.84
1999-2002	13.8	13.8	1.00	16.3	15.7	0.88	0.88
2000-2002	14.2	13.9	1.02	15.8	15.3	0.93	0.91
Less than Area Median Income							
1993-2002	38.7 %	37.5 %	1.03	42.1 %	41.3 %	0.94	0.91
1993-1995	33.0	31.0	1.06	37.0	36.8	0.90	0.84
1996-2002	40.3	39.4	1.02	43.5	42.6	0.95	0.92
1999-2002	41.5	40.9	1.01	44.2	43.3	0.96	0.94
2000-2002	42.1	40.8	1.03	43.7	42.9	0.98	0.95
Underserved Areas							
1993-2002	22.9 %	21.9 %	1.05	25.9 %	25.0 %	0.92	0.88
1993-1995	21.9	20.3	1.08	23.5	23.2	0.94	0.88
1996-2002	23.2	22.4	1.04	26.5	25.5	0.91	0.88
1999-2002	23.8	23.1	1.03	26.7	25.7	0.93	0.90
2000-2002	24.3	23.1	1.05	26.3	25.4	0.96	0.91

Source: The Fannie Mae and Freddie Mac data include information on all their single-family-owner mortgage purchases from the loan-level data that they provide to HUD. All mortgages are conventional conforming mortgages. "Conventional Conforming Market" data are from HMDA; loans with a loan-to-income ratio greater than six are excluded from the borrower income calculations. The numbers in the "W/O B&C Loans" column are the average market percentages after deducting B&C loans from the adjacent "Total" market column (see text for explanation). Special affordable includes very low-income borrowers and low-income borrowers in low-income census tracts. Data with missing values are excluded.

Table 4.14

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas Goal-Qualifying Home Purchase and Refinance Mortgages, 1996-2002 Various Market Definitions

	Fannie Mae Purchases	Freddie Mac Purchases	Conventional Conforming Market Originations: Total Market	W/O Mfg and Less Than $15K Loans	W/O Subprime Loans	W/O B&C Loans	W/O B&C and Mfg Loans	W/O B&C and LT $15K Loans	W/O B&C, Mfg, and LT $15K
Special Affordable									
1996	10.5	9.4	15.3	13.7	14.4	14.8	13.7	14.1	13.2
1997	11.5	10.1	16.4	14.8	14.8	15.6	14.5	15.0	14.0
1998	11.1	11.0	14.2	13.2	12.6	13.5	12.7	13.1	12.4
1999	12.4	13.4	18.3	17.0	16.1	17.3	16.2	16.9	15.9
2000	14.5	16.1	19.3	18.0	17.1	18.3	17.3	17.7	16.9
2001	13.9	13.3	15.0	14.4	13.9	14.5	14.1	14.2	13.9
2002	14.3	13.6	15.1	14.8	14.2	14.6	14.5	14.5	14.4
1996-2002	13.0	12.7	15.9	15.0	14.4	15.2	14.5	14.8	14.2
1999-2002	13.8	13.8	16.3	15.6	14.9	15.7	15.1	15.3	14.9
2000-2002	14.2	13.9	15.8	15.3	14.6	15.3	14.8	15.0	14.6
Less Than Area Median Income									
1996	37.0	34.8	42.4	40.4	41.4	41.9	40.5	41.2	39.8
1997	38.0	36.1	43.7	41.8	41.9	42.9	41.4	42.2	40.8
1998	37.4	36.7	40.9	39.6	38.9	39.9	38.9	39.5	38.6
1999	39.3	41.2	46.3	44.7	43.7	45.1	43.8	44.6	43.4
2000	42.3	44.3	47.4	45.9	44.9	46.3	45.1	45.6	44.6
2001	41.7	40.2	42.3	41.6	40.9	41.6	41.2	41.3	40.9
2002	42.2	40.1	43.2	42.9	41.9	42.6	42.4	42.4	42.2
1996-2002	40.3	39.4	43.5	42.3	41.7	42.6	41.8	42.2	41.4
1999-2002	41.5	40.9	44.2	43.3	42.4	43.3	42.7	43.0	42.4
2000-2002	42.1	40.8	43.7	42.9	42.1	42.9	42.5	42.6	42.1
Underserved Areas									
1996	22.9	20.7	26.7	25.3	25.3	26.0	25.0	25.6	24.6
1997	23.3	21.4	27.8	26.6	25.5	26.7	25.7	26.3	25.3
1998	21.1	20.8	24.8	23.9	22.4	23.6	23.0	23.4	22.7
1999	21.7	23.3	28.2	27.3	25.4	26.9	26.1	26.7	25.9
2000	25.2	24.6	30.3	29.4	27.3	28.9	28.2	28.6	27.9
2001	24.2	22.5	25.7	25.3	23.9	24.9	24.6	24.7	24.4
2002	24.0	22.9	25.2	25.0	23.4	24.3	24.2	24.2	24.1
1996-2002	23.2	22.4	26.5	25.8	24.3	25.5	24.9	25.2	24.7
1999-2002	23.8	23.1	26.7	26.2	24.5	25.7	25.3	25.5	25.1
2000-2002	24.3	23.1	26.3	25.9	24.3	25.4	25.1	25.2	24.9

Source: The Fannie Mae and Freddie Mac percentages are based on the loan-level data that they provide to HUD. All mortgages are conventional conforming home purchase and refinance mortgages. The Conventional Conforming Market data are from HMDA; loans with a loan-to-income-ratio greater than six are excluded from all borrower income calculations. See the text for an explanation of the adjustments for manufactured housing (Mfg), subprime, and B&C loans. Special affordable includes very low-income borrowers and low-income borrowers living in low-income census tracts. Data with missing values are excluded.

Table 4.15

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase and Refinance Mortgages, 1997-2002

Goals-Qualifying Category	Fannie Mae Purchases	Freddie Mac Purchases	Ratio of Fannie Mae to Freddie Mac	Conventional Conforming Market Originations (W/O B&C)	Ratio of GSE to Market (W/O B&C)	
					Fannie Mae	Freddie Mac
Special Affordable Borrower						
1997	11.5	10.1	1.14	15.6	0.74	0.65
1998	11.1	11.0	1.01	13.5	0.82	0.81
1999	12.4	13.4	0.93	17.3	0.72	0.77
2000	14.5	16.1	0.90	18.3	0.79	0.88
2001	13.9	13.3	1.05	14.5	0.96	0.92
2002	14.3	13.6	1.05	14.6	0.98	0.93
Less Than Area Median Income Borrower						
1997	38.0	36.1	1.05	42.9	0.89	0.84
1998	37.4	36.7	1.02	39.9	0.94	0.92
1999	39.3	41.2	0.95	45.1	0.87	0.91
2000	42.3	44.3	0.95	46.3	0.91	0.96
2001	41.7	40.2	1.04	41.6	1.00	0.97
2002	42.2	40.1	1.05	42.6	0.99	0.94
Underserved Areas						
1997	23.3	21.4	1.09	26.7	0.87	0.80
1998	21.1	20.8	1.01	23.6	0.89	0.88
1999	21.7	23.3	0.93	26.9	0.81	0.87
2000	25.2	24.6	1.02	28.9	0.87	0.85
2001	24.2	22.5	1.08	24.9	0.97	0.90
2002	24.0	22.9	1.05	24.3	0.99	0.94

Source: Special affordable includes very low-income borrowers plus low-income borrowers living in low-income census tracts. Very low-income (low-income) is defined as income less than or equal to 60 (80) percent of area median income. An underserved area is defined as a census tract with median income at or below 90 percent of the area median income; or a census tract with median income at or below 120 percent of the median inocme areas and a minority population of 30 percent or greater. Data with missing values are excluded.

Table 4.16

Annual Trends in GSE Purchases and Single-Family Lending in Metropolitan Areas
Goal-Qualifying Home Purchase and Refinanace Mortgages
1996-2002 GSE Data Reported on an Origination-Year Basis[1]

Goals-Qualifying Category	Fannie Mae Purchases	Freddie Mac Purchases	Ratio of Fannie Mae to Freddie Mac	Conventional Conforming Market Originations (W/O B&C)	Ratio of GSE to Market (W/O B&C)	
					Fannie Mae	Freddie Mac
Special Affordable Borrower						
1996	11.4	9.9	1.15	14.8	0.77	0.67
1997	11.1	10.7	1.04	15.6	0.71	0.69
1998	10.7	11.4	0.94	13.5	0.79	0.84
1999	13.9	15.0	0.93	17.3	0.80	0.87
2000	14.8	15.9	0.93	18.3	0.81	0.87
2001	13.4	12.7	1.06	14.5	0.92	0.88
2002 [2]	14.4	13.5	1.07	14.6	0.99	0.92
1996-2002	13.0	12.8	1.02	15.2	0.86	0.84
1999-2002	14.0	13.8	1.01	15.7	0.89	0.88
2000-2002	14.0	13.6	1.03	15.3	0.92	0.89
Less Than Area Median Income Borrower						
1996	38.2	35.6	1.07	41.9	0.91	0.85
1997	37.6	36.7	1.02	42.9	0.88	0.86
1998	36.7	37.3	0.98	39.9	0.92	0.93
1999	41.5	43.3	0.96	45.1	0.92	0.96
2000	42.8	43.8	0.98	46.3	0.92	0.95
2001	41.1	39.3	1.05	41.6	0.99	0.94
2002 [2]	42.8	40.3	1.06	42.6	1.00	0.95
1996-2002	40.4	39.5	1.02	42.6	0.95	0.93
1999-2002	42.0	41.0	1.02	43.3	0.97	0.95
2000-2002	42.1	40.4	1.04	42.9	0.98	0.94
Underserved Areas						
1996	23.7	21.0	1.13	26.0	0.91	0.81
1997	22.1	21.5	1.03	26.7	0.83	0.81
1998	20.5	21.2	0.97	23.6	0.87	0.90
1999	22.8	24.3	0.94	26.9	0.85	0.90
2000	25.4	25.2	1.01	28.9	0.88	0.87
2001	23.6	22.4	1.05	24.9	0.95	0.90
2002 [2]	23.7	22.3	1.06	24.3	0.98	0.92
1996-2002	23.0	22.4	1.03	25.5	0.90	0.88
1999-2002	23.7	23.1	1.03	25.7	0.92	0.90
2000-2002	23.9	22.8	1.05	25.4	0.94	0.90

Source: See text and notes to previous tables for variable definitions and market methodology.

[1] In this table, GSE data are reported on an “origination-year” basis rather than on a “purchase-year” basis (as are the previous tables on home purchase and refinance loans). This means that prior-year loans that the GSEs purchase in a particular calendar year are allocated back to their year of origination. For example, mortgages originated in 2000 but purchased by the GSEs in 2002 would be allocated to 2000 (the year of origination). Thus, the GSE percentages for 2000 represent GSE purchases (in 2000 and in 2001 and in 2002) of mortgages originated in 2000. For this reason, the GSE data in this table are more consistent with the market data. Market percentages are for current-year mortgage originations, based on HMDA data.

[2] The data for 2002 represent only the GSEs' purchases during 2002 of mortgages originated during 2002, as there are not yet any prior-year originations to report. Of course, during 2003 (and during following years), the GSEs will purchase prior-year loans originated in 2002, which would at that time be incorporated into the data for the year 2002.

excluded from the market definition along with B&C loans. In this case, the market ratio for Fannie Mae (Freddie Mac) would be was 0.91 (0.91) for special affordable loans, 0.97 (0.96) for low-mod loans, and 0.94 (0.91) for underserved area loans.

The most interesting shifts in performance occurred during 2001 and 2002, the first two years under HUD's higher housing goal targets. Table 4.15 shows that both GSEs improved their overall performance between 1999 and 2000, but they each fell back a little during the heavy refinancing year of 2001. But the primary market (without B&C loans) experienced a much larger decline in affordable lending during the refinancing wave than did either of the GSEs. Fannie Mae stood out in 2001 because of its particularly small decline in affordable lending. Between 2000 and 2001, Fannie Mae's special affordable lending fell by only 0.6 percentage points while Freddie Mac's fell by 2.8 percentage points and the market's fell by 3.8 percentage points. The corresponding percentage point declines for the underserved areas category were 1.0 for Fannie Mae, 1.9 for Freddie Mac, and 4.0 for the market. By the end of 2001, Fannie Mae led Freddie Mac in all three goals-qualifying categories, and had erased its gap with the low-mod market, but continued to lag the market on the special affordable and underserved areas categories.

During the refinancing wave of 2002, Fannie Mae improved slightly on the special affordable and low-mod categories and declined slightly on the underserved area category. Freddie Mac showed slight improvement on the special affordable and underserved area categories and remained about the same on the low-mod category. The market showed the same pattern as Fannie Mae. The end result of these changes can be seen by considering the market ratios in Table 4.15. In 2002, special affordable loans accounted for 14.3 percent of Fannie Mae's purchases and 14.6 percent of loans originated in the non-B&C portion of the conventional conforming market, yielding a "Fannie Mae-to-market" ratio of 0.98. Since Fannie Mae's market ratio for the special affordable category stood at 0.79 in 2000, Fannie Mae substantially closed its gap with the market during 2001 and 2002. During this period, Fannie Mae also mostly eliminated its market gap for the other two goals-qualifying categories. In 2002, underserved area loans accounted for 24.0 percent of Fannie Mae's purchases and 24.3 percent of loans originated in the non-B&C portion of the conventional conforming market, yielding a "Fannie Mae-to-market" ratio of 0.99, or approximately one. During 2002, low-mod loans accounted for 42.2 percent of Fannie Mae's purchases and 42.6 percent of loans originated in the market, yielding a "Fannie Mae-to-market" ratio of 0.99, or approximately one (also note that Fannie Mae slightly outperformed the low-mod market during 2001). Thus, while Fannie Mae continued to lag the market in 2002 on each of the three goals-qualifying categories, it was close to the market on the low-mod and underserved area categories, in particular.

Freddie Mac significantly lagged the single-family (home purchase and refinance loans combined) market during 2001 and 2002. In 2002, the "Freddie Mac-to-market" ratios were 0.93 for special affordable loans, 0.94 for low-mod loans, and 0.94 for underserved area loans.

Subprime Loans. Table 4.9 in Section C showed that the goals-qualifying shares of the home purchase market did not change much when originations by subprime lenders are excluded from the analysis; the reason is that subprime lenders operate primarily in the refinance market. Therefore, in this section's analysis of the total market (including refinance loans), one would expect the treatment of subprime lenders to significantly affect the market estimates and, indeed, this is the case. For the year 2001, excluding subprime loans reduced the goal-qualifying shares of the total market as follows: special affordable, from 15.0 to 13.9 percent; low-mod, from 42.3 to 40.9 percent; and underserved areas, from 25.7 to 23.9 percent. (See Table 4.14.) Similar declines take place in 2002.

As explained earlier, the comparisons in this analysis have defined the market to exclude the B&C portion of the subprime market. Industry observers estimate that A-minus loans account for about two-thirds of all subprime loans while the more risky B&C loans account for the remaining one-third. As explained earlier, this analysis reduces the goal-qualifying percentages from the HMDA data by half the differentials between (a) the market (unadjusted) and (b) the market without the specialized subprime lenders identified by Scheessele. As shown in Table 4.14, accounting for B&C loans in this manner reduces the year 2001 HMDA-reported goal-qualifying shares of the total (home purchase and refinance) conforming market as follows: special affordable, from 15.0 to 14.5 percent; low-mod, from 42.3 to 41.6 percent; and underserved areas, from 25.7 to 24.9 percent. Obviously, the GSEs' performance relative to the market will depend on which market definition is used (much as it did with the earlier examples of excluding manufactured housing loans in metropolitan areas from the market definition). For example, defining the conventional conforming market to exclude subprime loans, rather than only B&C loans, would increase Fannie Mae's 2002 special affordable (underserved area) market ratio from 0.98 to 1.01 (0.99 to 1.03). Similarly, it would increase Freddie Mac's special affordable (underserved area) market ratio from 0.93 to 0.96 (0.94 to 0.98). For the broader-defined low-mod category, redefining the market to exclude subprime loans, rather than only B&C loans, would increase Fannie Mae's (Freddie Mac's) market ratio from 0.99 to 1.01 (0.94 to 0.96).

Table 4.16 reports GSE purchase data for total (home purchase and refinance) loans on an origination-year basis. The "Freddie Mac to market" ratios in Table 4.16 show that Freddie Mac has lagged the primary market in funding mortgages covered by the housing goals. The "Fannie Mae to market" ratios in Table 4.16 show that except for the low-mod category in 2002 Fannie Mae has lagged the primary market in funding home purchase and refinance mortgages covered by the housing goals.

E. GSE Mortgage Purchases in Individual Metropolitan Areas

In this section, the GSEs' purchases of single-family owner-occupied home purchase loans are compared to the market in individual MSAs. There are three steps. First, goals-qualifying percentages for conventional conforming mortgage originations (without B&C loans) are computed for each year and for each MSA, based on HMDA data. Second, corresponding goals-qualifying percentages are computed for each GSE's purchases for each year and for each MSA. These two sets of percentages are the same as those used in the aggregate analysis discussed in the above sections. Third, the "GSE-to-market" ratio is then calculated by dividing each GSE percentage by the corresponding market percentage. For example, if it is calculated that one of the GSEs' purchases of low- and moderate-income loans in a particular MSA is 40 percent of their overall purchases in that MSA, while 44 percent of all home loans (excluding B&C loans) in that MSA qualify as low-mod, then the GSE-to-market ratio is 40/44 (or 0.91).

The goals-qualifying ratios for Fannie Mae and Freddie Mac can be compared for each MSA in a similar manner.

Tables 4.17, 4.18, and 4.19 summarize the performance of the GSEs within MSAs for 2000, 2001 and 2002 originations of home purchase loans. A GSE's performance is determined to be lagging the market if the ratio of the GSE housing goal loan purchases to their overall purchases is less than 99 percent of that same ratio for the market. (The analysis was conducted where the "lag" determination is made at 98 percent instead of 99 percent and the results showed little change.) In the example given in the above paragraph, that GSE would be considered lagging the market. Tables 4.17 (2000), 4.18 (2001) and 4.19 report the number of MSAs in which each GSE under-performs the market with respect to each of the three housing goal categories. The following points can be made from this data:

Fannie Mae's improvement between 2000 and 2002 shows up clearly in these tables. In 2000, Fannie Mae lagged the market in 296 (89 percent) of the 331 MSAs in the purchase of underserved area loans; this number decreased to 267 (81 percent) MSAs in 2001 and to 248 (75 percent) MSAs in 2002. Fannie Mae's improvement was even greater for special affordable and low-mod loans; in the latter case, Fannie Mae lagged the market in 133 (40 percent) MSAs in 2002, compared with 269 (81 percent) MSAs in 2000.

Freddie Mac's improvement between 2000 and 2002 was greater for underserved area loans. In 2000, Freddie Mac lagged the market in 292 (88 percent) of the 331 MSAs in the purchase of underserved area loans; this number decreased to 260 (79 percent) MSAs in 2001 and to 193 (58 percent) MSAs in 2002. Freddie Mac's made less improvement on the special affordable and low-mod categories; in the former case, Freddie Mac lagged the market in 234 (71 percent) MSAs in 2002, compared with 282 (85 percent) MSAs in 2000.

Freddie Mac outperformed Fannie Mae during 2002 in 65 percent of the MSAs, even though Freddie Mac's average national performance was below Fannie Mae's in that year (see Table 4.11 in Section C); this suggests that Freddie Mac performs better in small MSAs, as compared with Fannie Mae. This is also consistent with the fact that Fannie Mae lagged the market in 75 percent of the MSAs during 2002, even though its average national performance was only slightly below market performance (see Table 4.11); this suggests Fannie Mae does better in large MSAs, as compared with small MSAs.

Table 4.17

Analysis of GSEs' Purchases Across MSAs by Housing Goal Category 2000 Originations

	Underserved Areas		Low-Mod Income		Special Affordable	
Number of MSAs Analyzed	331	100.0%	331	100.0%	331	100.0%
Fannie Mae Lags the Market	296	89.4%	269	81.3%	299	90.3%
Freddie Mac Lags the Market	292	88.2%	282	85.2%	299	90.3%
Fannie Mae Lags Freddie Mac	158	47.7%	126	38.1%	153	46.2%
Freddie Mac Lags Fannie Mae	153	46.2%	190	57.4%	168	50.8%

Source: Fannie Mae and Freddie Mac data are from the loan-level data they provide to HUD. The market data are conforming originations as reported in HMDA data.

Notes: The GSE loans in this analysis include all single-family owner-occupied conventional conforming home purchase mortgages in metropolitan areas (as defined by OMB in 2000) purchased by the GSEs between 2000 and 2002 for loans originated in 2000. Loans with a loan-to-income ratio greater than six are excluded from Low-Mod Income and Special Affordable analyses.

In general, a GSE is determined to lag the market (or lag the other GSE) for a category (i.e., underserved area, low- and moderate-income, or special affordable defined as very low-income occupant or low-income occupant in low-income area) if the ratio of the share of category loans in that GSE's purchases to the share of category loans in market originations (or in the other GSE's purchases) is less than 99%. Exceptions to this procedure are as follows:

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, that MSA is excluded from the analysis for that category.

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by one of the GSEs, that GSE is counted as not lagging the market in that MSA for that category regardless of the calculated ratio.

If, for loans in a category in an MSA, there are 5 or more loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, then neither GSE is counted as lagging the other GSE in that MSA for that category regardless of the calculated ratio.

Table 4.18

Analysis of GSEs' Purchases Across MSAs by Housing Goal Category 2001 Originations

	Underserved Areas		Low-Mod Income		Special Affordable	
Number of MSAs Analyzed	331	100.0%	331	100.0%	331	100.0%
Fannie Mae Lags the Market	267	80.7%	202	61.0%	261	78.9%
Freddie Mac Lags the Market	260	78.5%	275	83.1%	279	84.3%
Fannie Mae Lags Freddie Mac	166	50.2%	83	25.1%	117	35.3%
Freddie Mac Lags Fannie Mae	147	44.4%	223	67.4%	201	60.7%

Source: Fannie Mae and Freddie Mac data are from the loan-level data they provide to HUD. The market data are conforming originations as reported in HMDA data.

Notes: The GSE loans in this analysis include all single-family owner-occupied conventional conforming home purchase mortgages in metropolitan areas (as defined by OMB in 2001) purchased by the GSEs between 2001 and 2002 for loans originated in 2001. Loans with a loan-to-income ratio greater than six are excluded from Low-Mod Income and Special Affordable analyses.

In general, a GSE is determined to lag the market (or lag the other GSE) for a category (i.e., underserved area, low- and moderate-income, or special affordable defined as very low-income occupant or low-income occupant in low-income area) if the ratio of the share of category loans in that GSE's purchases to the share of category loans in market originations (or in the other GSE's purchases) is less than 99%. Exceptions to this procedure are as follows:

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, that MSA is excluded from the analysis for that category.

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by one of the GSEs, that GSE is counted as not lagging the market in that MSA for that category regardless of the calculated ratio.

If, for loans in a category in an MSA, there are 5 or more loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, then neither GSE is counted as lagging the other GSE in that MSA for that category regardless of the calculated ratio.

Table 4.19

Analysis of GSEs' Purchases Across MSAs by Housing Goal Category 2002 Originations

	Underserved Areas		Low-Mod Income		Special Affordable	
Number of MSAs Analyzed	331	100.0%	331	100.0%	331	100.0%
Fannie Mae Lags the Market	248	74.9%	133	40.2%	204	61.6%
Freddie Mac Lags the Market	193	58.3%	234	70.7%	235	71.0%
Fannie Mae Lags Freddie Mac	203	61.3%	73	22.1%	121	36.6%
Freddie Mac Lags Fannie Mae	116	35.0%	237	71.6%	196	59.2%

Source: Fannie Mae and Freddie Mac data are from the loan-level data they provide to HUD. The market data are conforming originations as reported in HMDA data.

Notes: The GSE loans in this analysis include all single-family owner-occupied conventional conforming home purchase mortgages in metropolitan areas (as defined by OMB in 2002) purchased by the GSEs in 2002 for loans originated in 2002. Loans with a loan-to-income ratio greater than six are excluded from Low-Mod Income and Special Affordable analyses.

In general, a GSE is determined to lag the market (or lag the other GSE) for a category (i.e., underserved area, low- and moderate-income, or special affordable defined as very low-income occupant or low-income occupant in low-income area) if the ratio of the share of category loans in that GSE's purchases to the share of category loans in market originations (or in the other GSE's purchases) is less than 99%. Exceptions to this procedure are as follows:

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, that MSA is excluded from the analysis for that category.

If, for loans in a category in an MSA, there are fewer than 5 loans reported in the HMDA data and fewer than 5 loans purchased by one of the GSEs, that GSE is counted as not lagging the market in that MSA for that category regardless of the calculated ratio.

If, for loans in a category in an MSA, there are 5 or more loans reported in the HMDA data and fewer than 5 loans purchased by each of the GSEs, then neither GSE is counted as lagging the other GSE in that MSA for that category regardless of the calculated ratio.

APPENDIX B TO CHAPTER IV

GSE MARKET SHARES: HOME PURCHASE AND FIRST-TIME HOMEBUYER LOANS

A. Introduction

This appendix examines the role that the GSEs have played in the overall affordable lending market for home loans. There are two differences from the analysis of GSE performance in Appendix A. The first difference is that this section focuses on “market share” percentages rather than “distribution of business” percentages. A “market share” percentage measures the share of loans with a particular borrower or neighborhood characteristic that is funded by a particular market sector (such as FHA or the GSEs). In other words, a “market share” percentage measures a sector’s share of all home loans originated for a particular targeted group. The “market share” of a sector depends not only on the degree to which that sector concentrates its business on a targeted group (i.e., its “distribution of business” percentage) but also on the size, or overall mortgage volume, of the sector. If an industry sector has a large “market share” for a targeted group, then that sector is making an important contribution to meeting the credit needs of the group. Both “distribution of business” and “market share” data are important for evaluating the GSEs’ performance. In fact, given the large size of the GSEs, one would expect that a “market share” analysis would highlight their importance to the affordable lending market. For purposes of this economic analysis, the “market share” analysis also provides a measure of the room for further GSE growth in specific market segments. Those markets where the GSEs have a particularly low share may provide opportunities for further growth under the housing goals.

The second difference is that this section also examines the role of the GSEs in the total market for home loans, as well in the conventional conforming market. Such an approach provides a useful context for commenting on the contribution of Fannie Mae and Freddie Mac to overall affordable lending, particularly given evidence that conventional lenders have done a relatively poor job providing credit access to disadvantaged families, which renders the conventional market a poor benchmark for evaluating GSE performance. The analysis of first-time homebuyers conducts the market share analysis in terms of both the total market Section C below) and the conventional conforming market (Section D below).

B. GSEs’ Share of Home Purchase Lending

Table 4.20 reports market share estimates derived by combining HMDA market data with GSE and FHA loan-level data. To understand these estimates, consider the GSE market share percentage of 46 percent for “All Home Purchase Loans” at the bottom of the first column in the table. That market share percentage is interpreted as follows:

> It is estimated that home loans acquired by Fannie Mae and Freddie Mac during the years, 1999 to 2002, totaled 46 percent of all home loans originated in metropolitan areas during that period.

Table 4.20

FHA-Insured Loans and GSE Purchases as Shares of Home Purchase Mortgages Originated in Metropolitan Areas During 1999-2002

	GSE Purchases			FHA-Insured
	1999-2002	2001	2002	1999-2002
Low-Income Borrowers	37%	40%	43%	26% [1]
African-American and Hispanic Borrowers	29	32	34	33
Low-Income Tracts	34	38	44	26
High Minority Tracts	37	40	45	26
Underserved Areas[2]	36	39	44	25
All Home Purchase Loans	46	48	50	18

Source: 1999, 2000, 2001, and 2002 GSE, FHA, and HMDA data.

Notes: The FHA figures refer to percentages of all newly-mortgaged home purchase mortgage loans (except jumbo loans above the conforming loan limit) in metropolitan areas that were FHA insured during 1999, 2000, 2001, and 2002; the FHA data are from FHA. The GSE figures are defined differently-- they include GSE purchases in metropolitan areas during 1999 to 2002, of 1999-2002 conventional conforming mortgage originations and originations prior to 1999. (About 28% of the GSEs' 1999 purchases were mortgages originated prior to 1999.) Borrower and race percentages are calculated by reallocating missing FHA, GSE, and conventional market data for these variables. FHA had fewer cases with missing data than the GSEs and the market. As with the FHA data, the GSE purchases are expressed as a percentage of the total market in metropolitan areas. In this table, the "total market" includes all (government and conventional) home purchase mortgages originated in metropolitan areas during 1999, 2000, 2001, and 2002 that were below each year's conforming loan limit. The market data assume that HMDA covers 85 percent of the metropolitan mortgage market. A lower coverage assumption would increase the market totals and thus reduce the GSE and FHA market shares.

[1] That is, it is estimated that FHA insured 26 percent of all home purchase loans (below the conforming loan limit) that were originated for low-income borrowers in metropolitan areas during 1999-2002.

[2] Metropolitan census tracts with (1) median income less than or equal to 90 percent of AMI or (2) minority concentration greater than or equal to 30 percent and tract median income less than or equal to 120 percent of AMI.

It should be noted that “all home loans” refers to all government (FHA and VA) loans plus all conventional loans less than the conforming loan limit; in other words, only “jumbo loans” are excluded from this analysis. [197] The analysis is restricted to metropolitan areas because HMDA data (the source of the market estimates) are reliable only for metropolitan areas. B&C originations are included in the market data, since the purpose here is to gauge the GSEs’ role in the overall mortgage market. As discussed in Section III, excluding B&C loans, or even all subprime loans, would not materially affect this analysis of the home loan market since subprime loans are mainly for refinance purposes. The analysis below frequently combines purchases by Fannie Mae and Freddie Mac since previous sections have compared their performance relative to each other.

The GSE market share percentage for “Low-Income Borrowers” at the top of the first column of Table 4.20 has a similar interpretation:

> It is estimated that home loans for low-income borrowers acquired by Fannie Mae and Freddie Mac between 1999 and 2002 totaled 37 percent of all home loans originated for low-income borrowers in metropolitan areas.

According to the data in Table 4.20, the GSEs account for a major portion of the market for targeted groups. For example, purchases by Fannie Mae and Freddie Mac represented 37 percent of the low-income-borrower market and 34-37 percent of the markets in low-income, high-minority, and underserved census tracts. Thus, access to credit in these historically underserved markets depends importantly on the purchase activities of Fannie Mae and Freddie Mac.

However, the data in Table 4.20 show that the GSEs’ role in low-income and minority markets is significantly less than their role in the overall home loan market. Fannie Mae and Freddie Mac accounted for 46 percent of all home loans but only 36 percent of the loans financing properties in underserved neighborhoods. Their market share was even lower for loans to African-American and Hispanic borrowers—29 percent, or 17 percentage points less than the GSEs’ overall market share of 46 percent.

An encouraging finding is that the GSEs have increased their presence in the affordable lending market during 2001 and 2002, when they accounted for 38-45 percent of the loans financing properties in low-income, high-minority, and underserved neighborhoods and for 32-34 percent of loans for African-American and Hispanic borrowers. These market share figures for the GSEs are much higher than their performance during the two earlier years, 1999 and 2000.

To provide additional perspective, Table 4.20 also reports market share estimates for FHA.[198] During the 1999-2002 period, FHA’s overall market share was less than half of the

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[197] Following the purchase-year approach used in Sections C and D of Appendix A, the GSE purchase data include their acquisitions of “prior-year” as well as “current-year” mortgages, while the market data include only newly-originated (or "current year") mortgages.

[198] As explained in Section B of Appendix A, the GSEs’ affordable lending performance is evaluated relative to the conventional conforming market, as required by Congress in the 1992 GSE Act that established the housing goals. However, it is insightful to examine their overall role in the mortgage market and to contrast them with other major

GSEs' market share, as FHA insured only 18 percent of all home mortgages originated in metropolitan areas. However, FHA's share of the underserved segments of the market are not far below the GSEs' share, and in one case actually higher by a significant margin. For instance, between 1999 and 2002, FHA insured 26 percent of all mortgages originated in low-income census tracts, which was only eight percentage points less than the GSEs' market share of 34 percent in low-income census tracts. FHA's share of the market was particularly high for African-American and Hispanic borrowers, as FHA insured 33 percent of all home loans originated for these borrowers between 1999 and 2002—a figure four percentage points higher than the GSEs' share of 29 percent.[199] Thus, during the 1999-2002 period, FHA's overall market share was only two-fifths (39 percent) of the GSEs' combined market share, but its share of the market for loans to African-Americans and Hispanics was 14 percent larger than the GSEs' share of that market.

The data for the two recent years (2001 and 2002) indicate a larger market role for Fannie Mae and Freddie Mac relative to FHA. While the GSEs continued to have a much larger share of the overall market than FHA (48-50 percent for the GSEs versus 14-17 percent for FHA), their share of home loans for African-Americans and Hispanics jumped to 32-34 percent during 2001 and 2002, which was higher than the percentage share for FHA (27-32 percent). The differentials in market share between FHA and the GSEs on the other affordable lending categories listed in Table 4.20 were lower in 2001 and 2002 than in earlier years.

C. The GSEs' Share of the Total First-Time Homebuyer Market

This section summarizes two recent analyses of mortgage lending to first-time homebuyers; these two studies examine the total mortgage market, including both government and conventional loans originated throughout the U.S (i.e., in both metropolitan areas and non-metropolitan areas). Section D will summarize a third study of first-time homebuyers that focuses on the conventional conforming market. All three studies are market share studies that examine the GSEs' role in the first-time homebuyer market.

First, a study by Bunce concluded that the GSEs have played a particularly small role in funding minority first-time homebuyers.[200] Because HMDA does not require lenders to report information on first-time homebuyers, Bunce used data from the American Housing Survey to estimate the number of first-time homebuyers in the market. Using American Housing Survey data on home purchases from 1997 to 1999, Bunce estimated that the GSEs' share of the market for first-time African-American and Hispanic homebuyers was only 10-11 percent, or less than

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sectors of the market such as FHA. There is no intention here to imply that the GSEs should purchase the same types of loans that FHA insures.

[199] As explained in the notes to Table 4.20, HMDA data are the source of the market figures. It is assumed that HMDA data cover 85 percent of all mortgage originations in metropolitan areas. If HMDA data covered higher (lower) percentages of market loans, then the market shares for both the GSEs and FHA would be lower (higher).

[200] See Harold L. Bunce, *The GSEs' Funding of Affordable Loans: A 2000 Update*, Housing Finance Working Paper No. HF-013, Office of Policy Development and Research, HUD, April 2002.

one-third of their share (36 percent) of all home purchases during that period. FHA's share of this market was 36 percent, or twice its share (18 percent) of all home purchases.[201] These data highlight the small role that the GSEs have played in the important market for minority first-time homebuyers.

Bunce, Neal and Vandenbroucke (BNV) recently updated through 2001 the study by Bunce. In addition, BNV developed an improved methodology that combined industry, HMDA and AHS data to estimate the number of first-time homebuyers (by race and ethnicity) in the mortgage market during the years 1996 to 2001.[202] BNV's analysis includes the total mortgage market, that is, the government, conventional conforming, and jumbo sectors of the mortgage market.

Table 4.21 presents the key market shares estimated by BNV for the GSEs and FHA. The first figure (40.7) in Table 4.21 is interpreted as follows: purchases of home loans by Fannie Mae and Freddie Mac totaled 40.7 percent of all home loans financed between 1996 and 2001. Going down the first column shows that the GSEs' share of the first-time homebuyer market was 24.5 percent during the 1996-to-2001—a market share significantly lower than their overall market share of 40.7 percent.

FHA's greater focus on first-time homebuyers is also reflected in the market share data reported in Table 4.21. While FHA insured only 16.6 percent of all home loans originated between 1996 and 2001, it insured 30.9 percent of all first-time-homebuyer loans during that period. The GSEs, on the other hand, accounted for a larger share (40.7 percent) of the overall home purchase market but a smaller share (24.5 percent) of the first-time homebuyer market.

Table 4.21 also reports home purchase and first-time homebuyer information for minorities. During the more recent 1999-to-2001 period, the GSEs' loan purchases represented 41.5 percent of all home mortgages but only 24.3 percent of home loans for African-American

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[201] Bunce explains numerous assumptions and caveats related to combining American Housing Survey data on homebuyers with FHA and GSE data on mortgages. For example, the American Housing Survey (AHS) data used by Bunce included both financed home purchases and homes purchased with cash. If only financed home purchases were used, the market shares of both FHA and the GSEs would have been slightly higher (although the various patterns would have remained the same). The AHS defines first-time homebuyers as buyers who have never owned a home, while FHA and the GSEs define a first-time homebuyer more expansively as buyers who have not owned a home in the past three years. If it were possible to re-define the FHA and GSE data to be consistent with the AHS data, the FHA and GSE first-time homebuyer shares would be lower (to an unknown degree). For additional caveats with the AHS data, also see David A. Vandenbroucke, Sue G. Neal, and Harold L. Bunce, "First-Time Homebuyers: Trends from the American Housing Survey", November 2001, *U.S. Housing Market Condition,,* a quarterly publication of the Office of Policy Development and Research at HUD. In some years, home purchases as measured by the AHS declined while home purchases as measured by other data sources (e.g., HMDA) increased. In addition, the AHS home purchase data for separate minority groups (e.g., African-Americans, Hispanics) sometimes exhibited shifts inconsistent with other sources.

[202] BNV's methodology for estimating first-time borrowers consists of three steps: (1) estimate the total number of home purchase loans originated during a particular year using a mortgage market model that they develop; (2) disaggregate the home purchase loans in step (1) into racial and ethnic groups using HMDA data for metropolitan areas; and (3) for each racial and ethnic group in step (2), estimate the number of first-time homebuyers using mortgage and first-time homebuyer information from the American Housing Survey.

Table 4.21

Role of GSEs in First-Time Homebuyer Market
Market Shares, 1996-2001

GSE (FHA) Share of Market for:	1996-2001		1999-2001				2001			
	GSEs	FHA	Fannie Mae	Freddie Mac	GSEs	FHA	Fannie Mae	Freddie Mac	GSEs	FHA
1. All Homebuyers	40.7 % [1]	16.6 %	23.8 %	17.7 %	41.5 %	16.4 %	28.1 %	20.6 %	48.7 %	16.7 %
a. African-American and Hispanic	23.8	32.0	14.9	9.4	24.3	31.2	19.6	11.1	30.7	30.9
b. Minority	28.9	27.5	18.1	11.3	29.4	26.8	22.9	13.6	36.5	25.5
2. First-Time Homebuyers	24.5	30.9	14.4	9.7	24.1	31.2	16.9	11.6	28.5	30.7
a. African-American and Hispanic	14.0	44.8	9.1	5.2	14.3	46.5	12.6	7.1	19.7	46.1
b. Minority	17.3 [2]	38.7	10.8	6.4	17.2	39.1	14.7	8.5	23.2	37.8

Source: Bunce, Neal, and Vandenbroucke (2003). GSE home purchase loan data are from the loan-level data they report to HUD. The GSE first-time homebuyer data are from the census tract file of the Public Use Data Base. Missing race and ethnicity data are re-allocated based on the race and ethnicity percentage distribution of the non-missing data. FHA home purchase loan data are from FHA. The market includes all home purchase mortgages (government, conventional conforming, and jumbo loans); see text for explanations of mortgage market estimates for all homebuyers and first-time homebuyers.

[1] Interpreted as follows: Purchases of home loans by the GSEs between 1996 and 2001 totaled 40.7 percent of all home loans originated during that period.

[2] Interpreted as follows: Purchases of home loans by the GSEs between 1996 and 2001 totaled 17.3 percent of all home loans originated for minority first-time homebuyers during that period.

and Hispanic families, and just 14.3 percent of home loans for African-American and Hispanic first-time homebuyers. During this period, the GSEs' role in the market for first-time African-American and Hispanic homebuyers was only one-third of their role in the overall home loan market (14.3 percent versus 41.5 percent).

FHA, on the other hand, accounted for a much larger share of the minority first-time homebuyer market than it did of the overall homebuyer market. Between 1999 and 2001, FHA insured 46.5 percent of all loans for African-American and Hispanic first-time homebuyers—a market share that was almost three times its overall market share of 16.4 percent.[203] While FHA's market share was two-fifths of the GSEs' share of the overall home purchase market (16.4 percent versus 41.5 percent), FHA's market share was over three times the GSEs' share of the market for first-time African-American and Hispanic homebuyers (46.5 percent versus 14.3 percent). This finding that the GSEs have played a relatively minor role in the first-time minority market is similar to the conclusion reached by the Fed researchers (see below) and Bunce (2002) that the GSEs have provided little credit support to this underserved borrower group.

The results reported in Table 4.21 for the year 2001 suggest some optimism concerning the GSEs' role in the first-time homebuyer market. As explained in earlier sections, both GSEs, but particularly Fannie Mae, improved their affordable lending performance during 2001, at a time when the overall market's performance was slightly declining. This improvement is reflected in the higher first-time market shares for the GSEs during the year 2001, compared with the two previous years, 1999 and 2000 (not reported). The GSEs' share of the market for first-time African-American and Hispanic homebuyers jumped from about 11-12 percent during 1999 and 2000 to 19.7 percent in 2001. Fannie Mae's share of this market almost doubled during this period, rising from 7.0 percent in 1999 to 12.6 percent in 2001. Thus, while the GSEs continue to play a relatively small role in the minority first-time homebuyer market, during 2001 they improved their performance in this area.[204]

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[203] See Bunce, Neal, and Vandenbroucke, op. cit., for comparisons of various estimates of the market shares for FHA and the GSEs using different data bases and estimation methods. One can compare (a) the 1999-2001 market shares for FHA and the conventional conforming market in metropolitan areas calculated using the same methodology as Table 4.20 with (b) the 1999-2001 market share estimates reported in Table 4.20 for the entire mortgage market (including jumbo loans and covering non-metropolitan areas as well as metropolitan areas). The results are strikingly consistent. For the 1999-to-2001 period, the FHA share of the overall (African American and Hispanic) home loan market is estimated to be 19.0 percent (35.8 percent) under (a) versus 16.4 percent (31.2 percent) under (b). Lower percentage shares are expected for (b) because (b) includes jumbo loans. For the same period, the GSE share of the overall (African American and Hispanic) home loan market is estimated to be 46.0 percent (25-28 percent) under (a) versus 41.5 percent (24.3 percent) under (b).

[204] For other analyses of the GSEs' market role, see the following study by economists at the Federal Reserve Board: Glenn B. Canner, Wayne Passmore, and Brian J. Surette, "Distribution of Credit Risk among Providers of Mortgages to Lower-Income and Minority Homebuyers" in *Federal Reserve Bulletin*, 82(12): 1077-1102, December, 1996. This study considered several characteristics of the GSEs' loan purchases (such as amount of downpayment) and concluded that the GSEs have played a minimal role in providing credit support for underserved borrowers.

D. The GSEs' Share of the Conventional Conforming, First-time Homebuyer Market

Bunce and Gardner (2004) recently conducted an analysis of first-time homebuyers for the conventional conforming market. The Bunce and Gardner analysis used a similar methodology to the study by Bunce, Neal, and Vandenbroucke (2003) of first-time homebuyers in the total mortgage market. Bunce and Gardner restricted their analysis to the funding of first-time homebuyers in the conventional conforming market, which is the market where Fannie Mae and Freddie Mac operate. Their market share results are summarized in Table 4.22.

Between 1999 and 2001, the GSEs' purchases accounted for 56.6 percent of all home loans originated in the conventional conforming market of both metropolitan areas and non-metropolitan areas. In other words, Fannie Mae and Freddie Mac funded almost three out of every five homebuyers entering the conventional conforming market between 1999 and 2001. Their purchases of first-time homebuyer loans, on the other hand, accounted for only 39.8 percent of all first-time homebuyer loans originated in that market. Thus, while the GSEs funded approximately two out of every five first-time homebuyers entering the conventional conforming market, their market share (39.8 percent) for first-time homebuyers was only 70 percent of their market share (56.6 percent) for all home buyers.

As shown in Table 4.22, the GSEs have funded an even lower share of the minority first-time homebuyer market. Between 1999 and 2001, the GSEs purchases of African-American and Hispanic first-time homebuyer loans represented 30.9 percent of the conventional conforming market for these loans. Thus, while the GSEs have accounted for 56.6 percent of all home loans in the conventional conforming market, they have accounted for only 30.9 percent of loans originated in that market for African-American and Hispanic first-time homebuyers.

The market share data in Table 4.22 show some slight differences between the Freddie Mac and Fannie Mae in serving minority first-time homebuyers. During the 1999-to-2001 period, Freddie Mac's share (11.9 percent) of the African-American and Hispanic first-time homebuyer market was only one-half of its share (24.0 percent) of the home loan market. On the other hand, Fannie Mae's share (19.0 percent) of the African-American and Hispanic first-time homebuyer market was almost 60 percent of its share (32.5 percent) of the home loan market. Thus, while Fannie Mae performance in serving minority first-time homebuyers has been poor, it has been better than Freddie Mac's. This difference in performance between Fannie Mae and Freddie Mac was also seen in the portfolio percentages reported earlier in Table 4.12. Loans for African-American and Hispanic first-time homebuyers accounted for 6.9 percent of Fannie Mae's purchases of home loans between 1999 and 2001, a figure higher than Freddie Mac percentage of 5.3 percent. Loans for African-American and Hispanic first-time homebuyers accounted for 10.2 percent of all home loans originated in the conventional conforming market.

E. Downpayments on Loans Purchased by the GSEs

The level of downpayment can be an important obstacle to young families seeking their first homes. Examining the downpayment characteristics of the mortgages purchased by the GSEs might help explain why they have played a rather limited role in the first-time homebuyer

Table 4.22

GSEs' Share of Conventional Conforming Loans for All Homebuyers and for First-Time Homebuyers, 1996-2001

	1999-2001	1996-2001
All Homebuyers		
Fannie Mae Purchases	32.5%	32.4%
Freddie Mac Purchases	24.0%	23.2%
Both GSEs' Purchases	56.6%	55.5%
African-American and Hispanic Homebuyers		
Fannie Mae Purchases	27.7%	28.3%
Freddie Mac Purchases	17.5%	16.7%
Both GSEs' Purchases	45.2%	45.0%
Minority Homebuyers		
Fannie Mae Purchases	31.4%	31.9%
Freddie Mac Purchases	19.5%	18.8%
Both GSEs' Purchases	50.9%	50.7%
All First-Time Homebuyers		
Fannie Mae Purchases	22.9%	24.7%
Freddie Mac Purchases	16.9%	16.3%
Both GSEs' Purchases	39.8%	41.0%
African-American and Hispanic First-Time Homebuyers		
Fannie Mae Purchases	19.0%	20.2%
Freddie Mac Purchases	11.9%	10.4%
Both GSEs' Purchases	30.9%	30.6%
Minority First-Time Homebuyers		
Fannie Mae Purchases	20.1%	22.1%
Freddie Mac Purchases	13.0%	12.1%
Both GSEs' Purchases	33.1%	34.2%

Source: These data cover the entire U.S. market (i.e., both metropolitan and non-metropolitan areas.) See Bunce and Gardner (2004) for derivation of the conventional conforming market estimates and the source of the GSE data. Missing race and ethnicity data for first-time homebuyers are re-allocated based on the race and ethnicity percentage distribution of the non-missing data.

market

Table 4.23 reports the loan-to-value (LTV) distribution of home purchase mortgages acquired by the GSEs between 1997 and 2002. In Table 4.24, LTV data are provided for the GSEs' purchases of home loans that qualify for the three housing goals—special affordable, low-mod, and underserved areas. Three points stand out.

First, the GSEs (and particularly Fannie Mae) have recently increased their purchases of home loans with low downpayments. After remaining about 4 percent of Fannie Mae's purchases between 1997 and 2000, over-95-percent-LTV loans (or less-than-five-percent downpayment loans) jumped to 7.1 percent during 2001 and 7.7 percent in 2002. It is interesting that this jump in less-than-five-percent downpayment loans occurred in the same years that Fannie Mae improved its purchases of loans for low-income homebuyers, as discussed in earlier sections. As a share of Freddie Mac's purchases, over-95-percent-LTV loans increased from 1.1 percent in 1997 to 5.9 percent in 2000, before falling to 4.3 percent in 2001 and 4.8 percent in 2002. If the low-downpayment definition is expanded to ten percent (i.e., over-90-percent-LTV loans), Freddie Mac had about the same percentage (25 percent) of low-downpayment loans during 2001 as Fannie Mae. In fact, under the more expansive definition, Freddie Mac had the same share of over-90-percent-LTV loans in 2001 as it did in 1997 (about 25 percent), while Fannie Mae exhibited only a modest increase in the share of its purchases with low downpayments (from 23.2 percent in 1997 to 25.4 percent in 2001). The share of over-90-percent-LTV loans in Freddie Mac's purchases fell sharply from 25.0 percent in 2001 to 21.9 percent in 2002, while the share in Fannie Mae's purchases fell more modestly from 25.4 percent in 2001 to 24.2 percent in 2002.

Second, loans that qualify for the housing goals have lower downpayments than non-qualifying loans. In 2001 and 2002, over-95-percent-LTV loans accounted for about 15 percent of Fannie Mae's purchases of special affordable loans, 13 percent of low-mod loans, and 12 percent of underserved area loans, compared with about 7.5 percent of Fannie Mae's purchases of all home loans. These low-downpayment shares for 2001 and 2002 were almost double those for 2000 when over-95-percent-LTV loans accounted for 8.4 percent of Fannie Mae's purchases of special affordable loans and about 7 percent of its purchases of low-mod and underserved area loans. Fannie Mae's low-downpayment shares during 2001 were higher than Freddie Mac's shares of 12.3 percent for special affordable loans and about 8 percent for low-mod and underserved area loans. Between 2001 and 2002, Freddie Mac's over-95-percent-LTV shares fell sharply to 4-5 percent for the three housing goal categories, while Fannie Mae's shares remained in the 12-15 percent range. Under the more expansive, over-90-percent-LTV definition, almost one-third of Fannie Mae's goals-qualifying purchases during 2001 would be considered low downpayment, as would a slightly smaller percentage of Freddie Mac's purchases. However, during 2002, Freddie Mac's over-90-percent-LTV shares for the goals-qualifying loans fell to 23-24 percent.

Third, and somewhat surprising, a noticeable pattern among goals-qualifying loans purchased by the GSEs is the predominance of loans with high downpayments. For example, 55.9 percent of special affordable home loans purchased by Freddie Mac during 2002 had a downpayment of at least 20 percent, a percentage not much lower than the high-downpayment

Table 4.23

Loan-to-Value Distribution for GSE Home Purchase Loans, 1997-2002

Fannie Mae

	Number of Mortgages						Percent of Total					
LTV Ratio	1997	1998	1999	2000	2001	2002	1997	1998	1999	2000	2001	2002
0-80%	534,685	681,789	629,425	711,178	799,610	886,024	56.6%	52.3%	53.3%	59.0%	53.1%	53.0%
80-90%	173,786	239,579	189,471	189,021	209,715	215,442	18.4%	18.4%	16.0%	15.7%	13.9%	12.9%
90-95%	188,041	289,999	253,117	219,891	275,973	275,782	19.9%	22.2%	21.4%	18.3%	18.3%	16.5%
95% and Over	31,539	53,491	48,337	51,855	107,287	128,295	3.3%	4.1%	4.1%	4.3%	7.1%	7.7%
Missing	17,130	39,941	60,810	32,847	111,867	167,692	1.8%	3.1%	5.1%	2.7%	7.4%	10.0%
Total Loans	945,181	1,304,799	1,181,160	1,204,792	1,504,452	1,673,235	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Exhibit: Over 90%	219,580	343,490	301,454	271,746	383,260	404,077	23.2%	26.3%	25.5%	22.6%	25.5%	24.1%

Freddie Mac

	Number of Mortgages						Percent of Total					
LTV Ratio	1997	1998	1999	2000	2001	2002	1997	1998	1999	2000	2001	2002
0-80%	339,526	456,975	474,156	525,455	617,456	640,394	56.3%	53.8%	55.9%	56.9%	59.8%	59.1%
80-90%	110,745	154,230	137,117	136,968	140,365	152,777	18.4%	18.2%	16.2%	14.8%	13.6%	14.1%
90-95%	146,293	204,804	184,971	181,996	213,864	185,064	24.2%	24.1%	21.8%	19.7%	20.7%	17.1%
95% and Over	6,456	22,203	43,601	54,543	44,232	51,890	1.1%	2.6%	5.1%	5.9%	4.3%	4.8%
Missing	364	11,107	8,767	24,134	16,768	53,790	0.1%	1.3%	1.0%	2.6%	1.6%	5.0%
Total Loans	603,384	849,319	848,612	923,096	1,032,685	1,083,915	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Exhibit: Over 90%	152,749	227,007	228,572	236,539	258,096	236,954	25.3%	26.7%	26.9%	25.6%	25.0%	21.9%

Note: Includes home purchase mortgages financing owner-occupied one-unit properties.

share (59.1 percent) of all Freddie Mac's home loan purchases. Similarly, 46.8 percent of the home loans purchased by Fannie Mae in underserved areas during 2002 had a twenty percent or higher downpayment, compared with 53.0 percent of all home loans purchased by Fannie Mae.

Thus, the data in Tables 4.23 and 4.24 show a preponderance of high downpayment loans, even among lower-income borrowers who qualify for the housing goals. The past focus of the GSEs on high-downpayment loans provides some insight into a study by staff at the Federal Reserve Board who found that the GSEs have offered little credit support to the lower end of the mortgage market.[205] The fact that approximately half of the goals-qualifying loans purchased by the GSEs have a downpayment of over twenty percent is also consistent with findings reported earlier concerning the GSEs' minimal service to first-time homebuyers, who experience the most problems raising cash for a downpayment. On the other hand, the recent experience of Fannie Mae suggests that purchasing low-downpayment loans may be one technique for reaching out and funding low-income and minority families who are seeking to buy their first home.

Urban Institute Study. While the above analysis has focused on first-time homebuyers, there have been one study of the general impact of the housing goals on homeownership opportunities. In its study, *An Analysis of the Effects of the GSE Affordable Goals on Low- and Moderate-Income Families*, the Urban Institute (2002) analyzes the extent to which the GSEs' responses to The Federal Housing Enterprises Financial Safety and Soundness Act's (FHEFSSA) affordable housing goals have had their intended effect of making low- and moderate-income families better off. Specifically the report examines several methodologies determining that the conceptual model created by Van Order in 1996[206] provided the most complete description of how the primary and secondary markets interact. This model was then applied in a narrow scope to capital market outcomes which included GSE market shares and effective borrowing costs, and housing market outcomes that include low- and moderate-income homeownership rates. Finally, metropolitan American Housing Survey (AHS) data for eight cities were used to conduct empirical analyses of the two categories of outcomes. These cities included areas surveyed in 1992, the year before HUD adopted the affordable housing goals, to provide the baseline for the analysis. Four metropolitan areas were surveyed in 1992 and again in 1996: Cleveland, Indianapolis, Memphis and Oklahoma City. Four cities were surveyed in 1992 and again in 1998: Birmingham, Norfolk, Providence and Salt Lake City.

The study's empirical analysis suggests that the GSE affordable goals have helped to make homeownership more attainable for target families. The assessment of the effects of the affordable goals on capital markets showed that the GSE share of the conventional conforming market has increased, especially for lower income borrowers and neighborhoods. The study also concludes that the affordable housing goals have an impact on the purchase decisions of Fannie Mae and Freddie Mac. The study also finds that interest rates are lower in markets in which Fannie Mae and Freddie Mac purchase a higher proportion of conventional loans. Finally, the study's analysis shows that overall lending volume in a metropolitan area increases when the

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[205] Canner, et al, op. cit.

[206] Van Order, Robert. 1996. "Discrimination and the Secondary Mortgage Market." In John Goering and Ronald Wienk, eds. *Mortgage Discrimination, Race, and Federal Policy.* The Urban Institute Press, Washington, D.C.: 335-363.

Table 4.24

Loan-to-Value Characteristics of GSEs' Home Purchase Mortgages Meeting the Housing Goals, 1999-2002

Fannie Mae

LTV Ratio	Special Affordable				Low-Mod				Underserved Areas			
	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
0-80%	54.1%	55.2%	49.3%	48.1%	53.5%	56.3%	50.6%	51.3%	47.8%	53.1%	48.0%	46.8%
80-90%	13.8%	13.2%	12.5%	13.8%	16.4%	15.7%	14.2%	14.3%	17.9%	17.4%	15.2%	16.7%
90-95%	19.1%	18.0%	17.7%	18.5%	22.9%	20.4%	20.4%	19.7%	27.3%	22.2%	22.8%	22.5%
95% and Over	7.2%	8.4%	15.7%	14.7%	7.1%	7.4%	12.7%	12.7%	6.9%	7.2%	12.4%	12.4%
Missing	5.9%	5.1%	4.9%	4.9%	0.2%	0.2%	2.1%	2.1%	0.1%	0.1%	1.6%	1.6%
Total Loans	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Exhibit: Over 90%	26.2%	26.5%	33.4%	33.2%	29.9%	27.8%	33.1%	32.3%	34.2%	29.4%	35.2%	34.9%

Freddie Mac

LTV Ratio	Special Affordable				Low-Mod				Underserved Areas			
	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
0-80%	59.0%	52.4%	53.1%	55.9%	55.0%	52.4%	54.5%	56.1%	50.1%	47.4%	48.7%	53.3%
80-90%	13.9%	12.3%	12.4%	15.5%	15.6%	14.1%	13.6%	15.0%	17.6%	15.7%	15.1%	17.6%
90-95%	19.4%	17.5%	19.0%	18.5%	23.2%	20.1%	21.2%	20.0%	26.6%	24.6%	26.1%	20.8%
95% and Over	7.2%	12.6%	12.3%	4.7%	6.2%	10.1%	8.6%	4.1%	5.6%	9.4%	8.1%	3.6%
Missing	0.5%	5.2%	3.2%	5.4%	0.1%	3.4%	2.1%	4.7%	0.1%	2.9%	2.1%	4.8%
Total Loans	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Exhibit: Over 90%	26.6%	30.1%	31.2%	23.2%	29.3%	30.1%	29.9%	24.2%	32.2%	34.0%	34.2%	24.3%

Note: Includes home purchase mortgages financing owner-occupied one-unit properties.

GSEs purchase seasoned loans. Specifically, that homeownership rates increased at a faster rate for low-income families when compared to all families, and that in a subset of MSAs, minority homeownership rates also grew faster when compared to overall homeownership changes in those MSAs.

Finally, the affordable housing goal effects were examined for 80 MSAs in relation to the homeownership rate changes between 1991 and 1997. The study found that the GSEs, by purchasing loans originated to low-income families, helped to reduce the disparity between homeownership rates for lower and higher income families, suggesting that the liquidity created when the GSEs purchase loans originated to low-income families is recycled into more lending targeted to lower income homebuyers.

The authors of the study qualify their results by stating that they are based on available data that does not provide the level of detail necessary to conduct a fully controlled national assessment.